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OF BOSTON

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MEDIATION.

THE

FUNCTION OF THOUGHT.

BY

HENRIETTA SULLIVAN.

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PREFACE.

THE following pages form one chapter of an unfinished work, under the title of "Thoughts on the Mediator; or, the Relation of Christ to the World." The reader will perceive that it is an intermediate statement, and may therefore ask why a fragment is put before the public so evidently needing support and completion.

I reply that what is here given has cost a great deal of labor; that the question of devoting, from a busy life, the amount of time necessary to fill out the whole plan is a serious one; and I wish to feel assured that it will meet the course of thought in other minds sufficiently to make it worth while to develop it.

Whenever the work is completed, an introductory chapter will precede this one, to be followed by one on the Divine Being, and by another on the occasion for Mediation.

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MEDIATION.

THE FUNCTION OF THOUGHT.

In order to understand the full force of the Christian doctrine of the Mediator between God and man, the terms between which the Mediator stands must be first considered.

As Christ and his apostles claim the reasonableness of his doctrine, as they appeal to the honest conviction of men for its acceptance, we justly enquire for the solution of this problem, for such it appears to be when it first meets human thought. As a problem it may claim of right to make its own definition of terms. Or to state the question from a different point of view, the truths evolved by the doctrine of Mediation will throw strong lights on everything touched by them, and give new significance to all that we conceived before.

2. In all great systems of concrete facts there are various ways by which conclusions are reached. Several points might have directed to the discovery of the circulation of the blood, before it

was thought of by Harvey; and so many phenomena are related to the law of gravitation that large classes of facts may be brought forward to prove it without noticing the fall of objects to the earth, although that is the most conspicuous to us.

In like manner the convictions of believers in the central truths of Christianity may begin with various steps, and may expand and gain strength in several spheres of contemplation.

Such breadth is continually ascribed to the foundations of divine truth by the Scriptures. I think that the following lines of observation will show the base which exists in the normal constitution of humanity for the doctrine of Mediation; and also that this base is as wide and as universal as the whole scope of human thought.

3. When the existence of man is compared with that of other animals, a difference between him and them appears, immeasurably greater than that indicated by bodily structure.

It is a difference not only in degree, but in kind; it is evident that man possesses functions for knowledge, for labor, and for modes of life, of boundless scope and bearing. Not only individually but socially, as well practically as intellectually, does the human faculty claim a field beyond the natural reach of its visible life, and it is seen that humanity requires an illimitable range to attain the fulness of its stature, and

to accomplish all the purpose which its history, thus far prophesies of its future. The real characteristic of man lies in these mental functions rather than in his bodily organization, of which the divergence from the organization of the brutes is not sufficient to represent their immeasurable divergence of life and action. It is his function which defines man, and gives to humanity a form of life which is unique. It shows that the essential being of man is so constituted that he exercises powers and feels wants which are peculiar to himself, as far as we know. So that although he partake the course of nature in organic life, in growth and in decay, though he form one genus of the animal kingdom, and that one the highest, in other respects he is but partially represented by her process. Both his work and his inward consciousness distinguish him from the simple existence of nature. In her sphere he is never entirely at home. At her festivity he is a guest. He learns in her school, he imitates her method, but him she has never comprehended; and he looks in vain among her measures for something wherewith sufficiently to gird his own being, to shelter him from want, to satisfy his hunger, to clothe his nakedness, to consort with his lonely life.

It is man's faculty of thought which takes him beyond the world of phenomena, and which gives the special characteristic of human existence.

Without attempting to weigh the more difficult questions concerning the origin of thought, and without attaching ourselves to any of the great philosophical systems in its classification, we can note its first process, and then observe the several directions which it takes, and finally gather up our lines again to one point which will open directly upon our ultimate subject.

4. We must begin by recognizing the amazing variety of the warp of human existence, the chief part of which is habitually unnoticed by us. We are vegetative, but we cannot observe the process of nutrition or of growth. We are animal, but unless for a determined moment, we take no note of the beating of our hearts, or the heaving of our lungs, nor of many of the higher functions of animal life. Even voluntary actions often escape the attention. The processes of animal intelligence are rarely noted. Yet all these things combine to form the base upon which human reason rears its fabric. Not that the processes of reason are included in animal functions, but our animal experience is so involved in our mental processes, that we can never say, Here is an act of thought which has not, and never had, relations with our natural experience.

5. The systems proposed for the classification of human faculty suppose a certain mental structure, which is inferred from the observation of its

functions. But as no visible organization corresponds to these classifications, these systems not only rise from, but rest in inferences.

The structure of the organs of many of the lower functions of life declares their method, and gives a comprehensible answer to their purposes; the lungs are developed for breathing, the stomach for digestion, but the organism of the brain is wholly obscure. Its structure does not illustrate its functions, and its larger or lesser volume, its comparative smoothness or variety of surface, although associated with varying degrees of intelligence and power, do not explain even if they announce to observers the boundless diversity of action displayed by genera and by individuals. The determinations of observers are therefore wholly empirical.

Hence all systems of psychology and mental science begin their classifications after the fact of mental activity is given; that is to say, they classify mental action by facts resulting; their classification of mental function is therefore purely theoretic; the organism is beyond observation, for the structure of the brain does not explain it.

6. Still, as results show that mental action is complex, it is needful for us to seek the best definition, based upon its phenomena, that can be found. The following classification is the simplest, and I suppose the most widely accepted.

It has also this advantage. It is so universal that it can be brought to include the intelligence of animals, although its author did not intend, and many of its advocates may not allow, it to be extended so far.

The classification has thus been made:

The faculty of cognition.

The faculty of approval and disapproval.

The faculty of the will.

So that the combined action which results may be described as consisting of an idea, a judgment, and a volition.

Metaphysicians have confessed the difficulty of finding a word adapted to name suitably and fully the second faculty.

The beauty of this classification is that we can immediately describe the lowest animal action by it, which must be based on an idea, a desire or aversion, and a determination.

The action of thought is the result of an idea, a judgment, and an acceptance or rejection, — a seizure, a willing attention, a possessing action sufficiently expressed by will. These are all implied in a conclusion.

Simple speculation may exist by itself as sometimes in dreams. Or the judgment may be combined with it. Or, as in the highest activity of thought, the three functions act together. The student cannot follow a demonstration with-

out the action of the will to hold the attention, and judgment to determine the quality of the proposition beyond the speculative medium which receives it.

The dreamer and the poet may float onward, the consciousness upheld solely by the power of vision; sometimes such flight makes it necessary to leave the weight of the judgment altogether behind.

7. We shall proceed to note the functions of thought as they appear in acts, without enquiring further as to the organism whence it springs, or theorizing in any way concerning its origin.

It will be necessary to follow as closely as possible the action of intelligence in its several fields, because feeling is frequently claimed as the sphere of the religious life, of the influences of art, and not seldom of many of our highest judgments; therefore every considerate mind is bound to reclaim, as reasonable ground, the highest exercises of the mental faculty, instead of allowing them to be classed with what is individual, various, dubious.

No one has a right to propose a fresh classification of the physical functions, because those functions are defined not only by their action but by their organs. The present systems are confessedly somewhat incomplete, but that they are not essentially erroneous is testified by tangible facts.

But we may start at any time on a fresh line of observation of mental phenomena, without taking account of systems which are based upon the conceptions of individual philosophers, or of schools concerning the organism of the human mind; for such systems must be to a degree arbitrarily arranged to account for resulting facts, without the possibility of reaching the anterior conditions by which the whole must be governed.

We may therefore address ourselves to noting processes in order to make our definitions; remembering always that our definitions are subjective limits, that they are the limits of our actual knowledge, not of the facts, nor of our possible knowledge. We must always seek to know better than we do now.

8. We begin our enquiry with the consciousness of life. The life of plants has some remarkable phenomena which have only been lately observed by naturalists, but which remove some of the lines which formerly distinguished animal from vegetable physiology. The motions of plants are found to be more various and to accomplish more useful purposes than had been supposed, and to resemble in their effects the instinctive actions of animals, but from observations up to the present time, it seems that their motions are entirely automatic, and may be wholly accounted for in the sphere of vegetable structure and sensibility, without

the voluntary and intelligent functions of animal life. I will give one or two instances.

It has been observed that certain climbers have a peculiar rotary motion which indirectly accomplishes the purpose of attaching the plant to a support which shall uplift its weak branches from the ground. An index has been placed in front of the shoot of a convolvulus by which it was found that the branch swung around a large circle in the course of five hours. From this movement results the habit of the plant of twisting itself about neighboring supports, or when none are near, the shoots twist upward together. Plants have also responsive movements at certain stages of growth. If the young tendril of a grape vine be gently rubbed the tendril will shortly bend in the direction from which the touch came, and this action is also a means of attaching the pliable branches to objects which will aid in their support.

Now, animals have a spontaneity of action, especially when young, that is independent of ideas, desires, or volitions, and which is unlike the regular automatic action of plants, which may rather be compared to the beating of the heart, or the heaving of the lungs, although of inferior value. The plunging limbs of an infant are constantly enlarging its experience of facts, and leading it to form volitions. While the vegetable movement, more

defined both as to time and space, unconsciously falls into an admirable arrangement for the protection of the plant, the animal movement is aimless and useless, except as it is the means of informing the intelligence and furnishing it with ideas. The instinctive closing of a child's hand around any object which touches it, is analogous both to the clasping of the vine tendril, and the spasmodic action of the stamens of an orchid against an intruding insect's body, as well as to the first closing of the gums in the act of sucking. In one case there is a probability that the vine will be protected; in another that some other orchids will be fructified by the pollen conveyed by the wandering insect; and that is all. But in the first and last instances it is certain that the little hand will have learnt a lesson in its cunning, and that the mouth will develop the first impulse of conscious life.

If a sea-anemone perceive a morsel within its reach, it stretches its tentacles to enclose it. This action differs from that of the convolulus, because it involves the three distinctive acts of the intellect — an idea, a desire, a volition.

The further subject of animal intelligence needs scientific investigation. It is encumbered with a collection of myths that thoroughly confuse it. The observation of the habits of wild animals will give valuable data, but there will always be a

difficulty about collecting the facts concerning domestic animals because students rarely possess much capacity in training them, and people generally are as prone to exaggerate the performances of favorite animals as parents are to relate prodigies of their offspring, or as an autobiographer is to remember acts of superhuman precocity.

9. We may reasonably conclude that animals compare facts, draw conclusions, and form plans leading to an immediate result; and that such intelligence is common to men and animals.[1] It

[1] Certain writers on metaphysics have taken such absurd positions on the subject of animal intelligence, that I refer — from systems which are formed by the same principle as that by which the famous German drew his camel, viz. from the depth of his own consciousness — to the remarkable series of observations on the American beaver and his works, by Lewis H. Morgan. The magnificent river system of North America gives occasion for an extraordinary development of the constructive habits of the beaver beyond those of his European relative. Mr. Morgan adds to his own observation of their ways all the information he can collect from books, ancient and modern, and from trappers, white and Indian, carefully sifting it. I can only touch upon some of his well-supported conclusions.

He shows that the dams and canals are the work of successive generations of the short-lived beaver. Their canals are constructed as circumstances make water carriage desirable, their dams as they require a fixed water level; they take warning by the lowering of this level to seek for the breach in the dam and to repair it. He decides that their work, by its various adaptation to circumstances and by its elaboration, shows free intelligence. He seems to have demonstrated at least two points :

First, that the works of beavers show original design and adaptation to circumstances which testify to a function homologous to that of man in his direct purposes, and which does not belong to the

might be described as reason, if reason were understood so generally as to include the whole

inscrutable and gratuitous function described by metaphysicians as instinct, being evidently founded on primary reasoning processes.

Secondly, what is most new and extraordinary, that beavers constructing works of great extent, and not working in communities like bees and ants, transmit works from generation to generation, which are enlarged, improved, and, doubtless, have been developed in design by successive beavers, while beavers under less favorable circumstances rarely do anything but make burrows. This brings beaver work nearer to the historic character of human labor than anything heretofore observed of animal life.

Mr. Morgan concludes that these and other like facts, such as the excavating of canals on occasion when water carriage would be advantageous, but not invariably, refute Sir Wm. Hamilton's definition of animal instinct as "an agent which performs ignorantly and blindly a work of intelligence and knowledge." He justly says: "The general intelligence of mankind never adopted the speculations of metaphysicians with reference to the endowments of inferior animals." Anybody who can command the services of a dog, or who has cared to become acquainted with the ideas of a horse, understands better than several of the most learned writers on mental philosopy what animal intelligence signifies.

Mr. Morgan, with his fine observing power, is careful to disabuse us of the idea that the curve which is often found in beaver dams is given on the principle of an arch against pressure; for he finds that the dams are curved down stream as well as up stream, and he shows that the curve is doubtless the result of accident. This is analagous to Mr. Darwin's demonstration, that bees do not make hexagonal cells on geometric principles, but that their round cells become hexagonal in consequence of being closely packed; and that bees will excavate round cells out of a cake of wax placed before them. The suggestion that the term "instinct, as used to express the intelligent acts of animals, should be dropped," will commend itself to observers. He says: "When carried to its legitimate results it endows every animal with a supernatural prin-

science of relations. Perhaps it would be better to divide the acts of intelligence into primary, and compound, or reflective. Primary relations are the field of animal intelligence; but reason also deals with representative relations, such as can only be conceived by man after he has thrown

ciple, and makes each of his intelligent acts little short of a miracle."

Nevertheless, I am compelled to disagree with Mr. Morgan when he says: "As we are unable to find any difference in kind between the manifestations of perception, appetite, passion, memory, reason, and will, on the part of a mute, and the corresponding manifestations on the part of man, we are led to the conclusion that the difference is one of degree and not of kind; and therefore that the principle from which they emanate, is the same in kind, but bestowed in different measure to adapt each species to its particular mode of life."

Neither can I think that the progress of humanity from the prehistoric man, the contemporary of mammoths and other extinct races of animals, to the present time, can in any way represent or account for the extraordinary superiority exhibited by human over animal intelligence. It is not a question of degree, but of essentially different function. The most stupid individuals of the most inferior races of men use tools; the primeval man is tracked by his flint knives and arrow-heads; and among the earliest relics are found representations of animals of extinct species engraved on reindeer horn and ivory tusk. No animal uses tools. Or possibly some one may consider the throwing cocoanuts at enemies by monkies a use of missiles kindred to human devices. But certainly no animal ever executes a representative form, or indeed notices one. Otherwise, these remains might be the relics of monkies.

To the happy remark of Mr. Morgan on the difference of conclusion to which metaphysicians and the general intelligence of mankind arrive concerning animal endowment, it might be added that neither does the general intelligence of men adopt the conclusion of positive philosophers and certain comparative anatomists concerning the identity of the intelligence of men and brutes.

the natural facts he has gathered into the alembic of his own mind, recast them in his own forms, and reproduced them in his own subject, which processes there is no reason to believe animals ever perform. They doubtless form simple generalizations, like food, men, trees; but man conceives types which represent generalizations, and holds them up to be inspected in new and obscure relations.

10. The effectual product of reason is thought; and a definition can be made which perfectly distinguishes it from every act of mere animal intelligence. Thought has a secondary action. Its function is to form standards, and then to note the relations of things to these standards. Thought is always reflective; it presents its object in a mirror, so that the object, the image, and the mirror comprise three terms. Thought is always subjective. It comprises the object and the subject in the same act; though one of them may be in active presentation at one time, and passive at another.

It must be allowed that it is no act of thought to perceive relations between concrete things; for this the brutes continually do. But thought perceives relations to standards which are generalized from particulars, standards which may be universal, but which are at any rate distinguishable from the concrete things in which they

are represented by their general character. They are gathered by thought from concrete things; they are conceived by thought in the moulds she has made from concrete things; they are held by thought by means of types which represent concrete things generalized. Nevertheless they are not of a concrete nature; in some cases the terms of their definition make their concrete existence impossible. Therefore they are essentially and eternally real, being secure from the contradictions they would be liable to incur were they involved in concrete conditions, and from which they are secured by the fact that their appearance in concrete things is either representative or conventional, or sometimes purely ideal when the concrete is confessedly subordinate to the expression.

11. I am endeavoring to make a plain statement of truths which, although not new, are somewhat difficult to reproduce intelligibly; therefore I shall illustrate each point at the risk of taking superfluous pains.

When it is possible I shall draw illustrations from concrete things, at any rate from perfectly defined things, though sometimes even this cannot be done, as some notions are so remote as to depend upon foregone conclusions for the possibility of representation. Such is the pure idea of justice.

I will quote each of the statements just made, and place the instance in brackets.

"Thought perceives relations to standards which are generalized from particulars; these standards may be universal."

[Such is justice; it is a notion which the mind either gathers from or recognizes in the transactions of human life, which it deduces from particulars and conceives in its judgments. I shall speak later of the origin of this and kindred ideas; but I think it will be conceded that its standard is originally drawn from particulars and is made universal by thought. It is a mere name, unless it be conceived and drawn from acts; and it is imperfect, unless it be independent and universal].

"But which standards are at any rate distinguishable from the concrete things in which they are represented, and require a distinct act of thought to conceive them."

[For instance, the order of vertebrata. A vertebrate does not represent an individual animal, but it represents any animal with a backbone. The type is gathered from men, birds, fishes, whales, serpents, etc. It is conceived by thought with the definition restricted to a backbone; but every vertebrate animal involves many particulars besides, without some of which we can form no concrete conception of it. Now thought cannot possibly embrace in one act all the varying characters of the order, which characters are moreover the basis of minor classifications; as

lungs and gills, fins or fingers, scales or feathers or hair, etc. So that the type is not of concrete character, although its conception results from the action of thought upon concrete things].

"In some cases the terms of their definition makes the concrete existence of these types impossible."

[Such as the mathematical point and straight line].

"Therefore they are essentially and immutably real, being secure from the contradictions to which they would be liable were they included in concrete conditions."

[The type of the naturalist does not appear in nature, but only in thought. Look at the botanist's type of the corolla of the rosacae, at the zoölogist's type of an echinoderm; neither in the garden nor the field shall we find a flower with five equal petals; nor on the shore a sea-urchin with five mathematically equal rays. Nor do we ever see the two equal sides which represent the typical human form. If we draw a line we have depth and breadth which are forbidden by the scientific definition. Science has the advantage of perfect types in her theorems; she is thus undisturbed by the circumstances which alter and impair the forms of nature].

"Their appearance in concrete things is either representative, or conventional, or sometimes

purely ideal, when the concrete facts are confessedly subordinated to the expression."

[Language is the most universal type of thought. As a type it is representative and conventional, but it is also the type of types, having a secondary action upon thought. We reflect concrete things by thought, and we reflect thought by language. But science has sometimes a simpler mode. The type of natural phenomena is merely a purified idea of the same. So is the type of mathematical figures. But the types of equations are representative. The types of jurisprudence are both conventional and representative. The forms of civil, and specially of common law are widely conventional. Law in its general function is a type representative of authority, justice, and benevolence. The standard is the protection of society and of the individual, the absolute realization of which has never been seen on earth.

Even musical instruments are not capable of representing the intervals of the scale with perfect accuracy. The musician has a type of harmony in his mind which he has never heard. We say that a thing is white because we have the idea of whiteness in our minds. We have the idea of whiteness because we have generalized it from white objects. We have an idea of perfect whiteness which we do not find in a world of shadows].

12. We form standards, and then we refer all

objects to them. We may term these standards general ideas, types, or predicates, according to their use and position. Type is on many accounts the best word, because idea supposes a complete image. By convention idea has come to mean a great deal that does not belong to it by etymology; whereas type, being literally the mould in which a plastic form is cast, is distinguished from the image cast in it. Although perfectly distinct, it does not aim at concrete realization or completion. Thus it is an admirable figure of speech by which to express those possessions of the mind which are its own property and of its own creation, and which constitute the forms by which it works and builds up its subjects. I know of no substitute for type that is so expressive. [The use of archetype is very ancient; the question of archetypal ideas will be discussed later.]

These types constitute, so to speak, the whole stock in trade by which thought pursues its vast, its boundless commerce. They are the vehicles by which she transcends her native sphere; they are the measures of her values, the coin of her realm, the patterns of her product, the gauge of all her material.

13. I repeat, the first step as well as the universal act which constitutes thought, is the reference to a third term, which itself has generated. This is the fundamental process of the reason

through every form of her varied work. By it simple intelligence is developed into thought, and made to differ from any possible accomplishment of the best trained dog or the most sagacious elephant.

It is the action by which the child of man emerges from animal life. It is this action which is the completion of the artist's work. It is this action which is the elaborate accomplishment of the man of science.

The difficulty which the child experiences in the use of pronouns, is that he is thus furnished with three names for the same thing. I, me, John; he, him, Peter. There is probably no indistinctness in the perception of the relations thus represented; he is confused by the complexity of language.

The element of thought, while it employs a self-generated medium, at the same time takes the mind beyond the field of self-consciousness. Its types reflect the objects of its attention in classifications. Now there is no class of me's, or thou's, or he's; nor of we's, or your's, or they's. I cannot see why a brute does not understand all they represent; his deficiency, as well as the child's delay, lies in the power of representing these relations by the conventions of words.

14. A distinctively human power is shown in the effect given by the mind to representative

form. A child perceives that his rude playthings are horses and dogs, which a brute could not do; for animals never recognize a representation, unless it be so closely imitative as to deceive the senses. So soon as an animal discovers that it is a representation merely, he despises it. But a child will not only notice forms in light and shade without color, but also mere outlines. A rude drawing will attract him strongly. As thought is developed he loses his taste for what is merely imitative, while what is representative moves him more and more profoundly. I shall later make the definition between these two classes. It is enough to say at present that a thinking child possesses a power of representing, classifying, typifying, symbolizing, which places him forever beyond the monkies.

15. The organism of thought is wholly concealed. Great as is the difference of form between the human brain and the brain of brutes, it is not sufficient of itself to indicate that one race will transmit a history and a civilization from man to man, while the others will perish day by day unnoted by their fellows, any more than the superior shape and texture of the human hand can declare it to be a writer, a builder, a painter, or a musician rather than the monkey's hand which will do little beside climb and pick fruit. Therefore the quality of thought must be estimated by its method, and

by its results, without expecting much light upon it from the physical organism. Although considerable discoveries may yet be made in that direction, the science of the organisms of nature can never include a power whose first office is to step beyond natural limits.

16. When thought comes to study itself it has a peculiar difficulty. Thought can no more see itself or reflect its own action than the eye can turn its own vision inward. The occulist studies other men's eyes; but other men's thoughts are to be studied in their product, and not in their function. It is painful to think of the utter solitude of our mental life, and of that unanswerable question, whether there be, indeed, aught in existence, except one desolate self-consciousness with its dreams.

If we try to study the action of thought retrospectively, we have to depend upon the representation of memory, a most defective ground for these facts, because it chiefly comprizes those points upon which the attention has been fixed, they really forming but a small portion of mental experience, as we discover if we carefully analyze any strong impression we have received. It requires more than a critic, an expert indeed, to tell a man why he enjoys a picture, or a piece of music, or anything else; and it is indeed a candid man that recognizes all his reasons for a difficult

conclusion in a practical question of action. Equally defective are the reasons given for many other mental results. Hence it is often difficult for practical men to see the advantages of going through the processes of thought. Occult as are the functions of the brain in the sensorium and the medium wherein the associating and relating of impressions takes place, these organic functions are not so hopelessly obscure as the office of thought after it has taken that remove which places its further functions beyond natural limits, except as it gathers its forces and turns back to subdue and to possess nature by the greatness of the power which is developed in departing from her.

I find it necessary here to state the significance with which certain words will be used.

17. The word "nature" has acquired three distinct meanings:

First, In its most general use it signifies the inherent constitution of things, whatever they may be. In this use many writers on law and on religion include in nature what others call necessary truths, or the necessary results of thought. As the etymology of "nature" is derived from generation, it is not used for what is not generated with any peculiar appropriateness. The divine nature, the nature of immutable truths, of mathematical principles, might be more specifically

described by such words as character or attribute; or in certain cases by the word force in its modern significance. Nevertheless this use is often convenient.

Second, Nature and natural are sometimes used, especially by philosophers and moralists of the last age, as representing the standard and perfection of all human codes of law, morals, and religion; the perfection from which they have departed; the standard to which they ought to return. This use is derived from the assumption that man in a state of nature, whatever that may be, is something higher than man in a state of civilization. As thinkers succeed in relating the sciences of humanity, ethics, jurisprudence, etc. to observed facts the theories which are based on such assumptions are dispelled, and we may safely omit this department of nature from our study.

Third, Nature is used to represent the phenomenal world in distinction from thought. Man and nature are placed in antithesis. Man is included in nature by physical organization and by animal intelligence; but he is distinguished from her by his all-pervading thought; nature and thought are included in his being, and they distinguish its spheres. However difficult it may be to always bear in mind this complex character of being, it is perfectly defined for us. The distinction between thought and natural intelligence is

drawn by the reflective action of the human mind. Whenever a child cogitates upon a fact and refers it to a general standard, he is surpassing the bound of his animal nature. He performs an act because it is right, or abstains because it is wrong, while a brute merely refers one fact to another by association, or by contiguity of experience; as that his master will whip him if he lies on the sofa, or that he was whipped because he lay upon the sofa; but this association of facts is distinct from mental reflection, as may be understood by what has been already said. In short, while the working process of thought procures its models from natural things, these models do not belong to nature. Thus, the first use of the word nature is to signify the general constitution of things. The second use is to represent the normal standard of humanity. The third and most appropriate, is to represent phenomenal effects and forces. These ambiguous meanings have produced great confusion. Words are primarily used to express thought; but often they react and shape thought; sometimes they confuse thought, sometimes they extinguish it. And it would be difficult to bring forward a word that has been more wildly and mischievously used than nature.

In these pages nature will generally represent the sphere of phenomena and of phenomenal forces, and phenomenal or animal life, in distinction

from the sphere of thought and the works of thought, always remembering that it is the function of thought to translate natural things into its own domain. The rocks from the mountain sides rose into the arches of king Solomon's bridge. The stones of Hellas grew into divinities in the hands of the Greeks. The forest trees relate the ancient stories of men in cathedral choirs. The iron ore becomes the multitudinous hand and foot of man. The thinker is himself included in nature, and in her course his own genus becomes the subject of his thought.

This restriction of the word is exceedingly useful and is sufficiently justified by custom.

18. The progress of thought always tends to closer definition and to winning new ground from chaos. The process of science is the definition of unknown quantities and qualities, and the application of formulas to what seemed irregular and unrelated. So that there is a class of words which are continually acquiring more precision in their application to their subjects. Before the best definitions are statedly made by sufficient authority the unwritten laws of speech have already determined new limits, sometimes enlarging, sometimes restricting the signification. As I have not been able to find a satisfactory definition of certain words which have recently been brought into an immensely increased scientific usage, I give what

seems to be their meaning as used by the best modern writers.

19. The three words, homology, analogy, and simulation are to be distinguished from each other. The two first are often used synonymously by older writers, or both meanings are attached to analogy; but distinct limitations are to be recognized not only in mathematics but in the descriptions of naturalists.

Simulation expresses resemblance which is only apparent, or counterfeit presentment. Analogy is similarity of function or mode of action or mode of development. Homology is the likeness of essential being, the identity of constitution, and of the most general relations.

These three modes of resemblance are to be noted in the world of organic life. Simulation is shown in fantastic vegetable and animal forms, by their imitation of things which they are essentially unlike; as of reptile and insect forms by the orchids; or in the representation of a single blossom by a cluster of flowers, like the sunflower or the daisy; or in the imitative propensities of animals like monkies and parrots, which mock the acts of reason. The development and metamorphoses of individual embryonic forms have analogies with the succession of the adult forms of species upon the earth. The crabs and lobsters of this age begin life in the form of the extinct

trilobite. The elephant calf resembles the adult mammoth.

Homology is sameness discovered through various disguises of form and function. It is structural and essential. The hand of man, the wing of a bat, the flipper of a seal, are homologous; they represent the same part of the general structure and bear the same relation to the whole, although so different in use as well as in appearance.

These distinctions place these classes of facts before different faculties. Simulation belongs to the field of simple impressions, and is discovered by animal intelligence, which is indeed often deceived by it; while analogy and homology are only discovered by thought. The one resides in appearances, while with the others appearances are wholly out of the question. They describe things solely by general relations.

20. Some words which have received careful definition from students, continue to be used with widely varying meanings, so that it becomes necessary to make a selection. I shall therefore take reason and the understanding to signify the differing action of the same faculty. The fundamental distinction between them disappears if it be recognized that the characteristic of each is elicited by the subject of each. It has been said by a modern writer that the action of reason re-

sembles that of the natural sense more than that of the understanding: reason being simple and authoritative, while the understanding is reflective and subjective. This is because the understanding acts upon things which it can compass with its types. The reason addresses itself to things which it can only know by bringing them into the range of general principles. The reason has a judicial character, because it accepts evidence which is evidence only to right-minded men, while the understanding gives and requires demonstration. I think that the real distinction in the use of the most judicious writers is, that the understanding works on subjects where it may hope for completion; the reason on subjects where it can only attain proximate results, or ultimate truths in representative rather than typical forms. One might be called the comprehending, the other the apprehending function of thought.[1]

It is a fatal error to suppose that the conclusions of the reason must be subjected to the understanding, or must be able to force conviction upon unreasonable men, must be undeniable before they can be held to be valid. To insist that every-

[1] "THE SOUL.

"When she rates things and moves from ground to ground,
The name of Reason she obtains by this;
But when by Reason she the truth hath found,
And standeth fixt, she Understanding is."

Sir John Davies' Nosce teipsum.

thing must be understood before it is known and believed limits the progress of thought, and narrows the individual mind.

21. The several acts of intelligence may be defined thus :

Impressions, which are derived through the senses and recalled by association, belonging to the sphere of animal intelligence.

Perceptions, which are acts of the reason engaged with phenomena, relating their objects to fixed types and an absolute intellectual order.

Ideas have always had a wide scope and a various definition. It would have been most convenient had they been kept to their etymological meaning, and the word "notion" used for such things as can be known, but not imaged, viz. infinity, space, eternity, etc. These are not abstract ideas, because they are neither abstracted nor are they imaged; they are deduced, not from the simple impressions of things, but from the conclusions of thought; and thus they are recognized mental positions, so to speak. Humanity, order, classification, wrong, are general ideas, because we derive their types from experience. Nevertheless idea will probably always retain its extended signification.

Conception is a word which may be used for the general act of thought, for the best as well as the least defined, provided it have that double

action which I have endeavored to show, is the essential distinction between thinking and every form of animal intelligence.

22. The distinction between representative and typical must be kept in view in order to distinguish the incomplete from the perfect act of thought. For instance, justice is representative; judicial is typical, because justice is represented by a remote and incomplete conception; judicial by the definite type of legal forms. The definitions of natural science as well as of mathematics are typical, while other language is representative, unless it be wholly conventional, like proper names.

23. I would add that the human reason sometimes takes an oracular position. It instructs the court. *Cogito ergo sum*, is a dictum which none can go behind. There are occasions on which it might be further conjugated: I know it, therefore it is. Reason and the understanding being recognized as the same general faculty, the time comes, and is always coming, when the knowledge of the one resolves itself into the knowledge, complete in process, of the other, as is seen in various fields. What is known to the reason may, or may not, be proved by the understanding.

In the development of a subject it is sometimes best to advance from the premises to the conclusion; at other times it is easier to state the con-

clusion, and afterward show the steps that lead to it.

24. I can open our subject best by first classing the three distinctive functions of thought, and describing their bearing on the relations, and in the results of human life. This will show that the peculiar power, as well as dignity, of humanity results from their exercise. Afterward follow the consideration of the knowing power of the reason and the ultimate truths which it obtains, and of the necessity of those truths to the welfare of the individual and the safety of society.

The specific functions of thinking beings as they manifest themselves in life and action may be classed thus:

I. The function for Language.

II. The function for Proportion.

III. The function for Jurisprudence.

These functions have a subjective action. Whatever objective truth they dispense is conceived in subjective terms. They represent final truths by their own symbols. They class the facts of phenomena by types which they have drawn from nature. They mediate between the mind and its subject by types founded upon its experience, and by them it conquers.

They are connate functions. The expressive, the perceptive, the associating, the generalizing acts of the reason belong to each and all of them.

They are different modes of one process, although these modes have a greatly varied expression.

I shall give the more extended consideration to the function of proportion.

25. The distinguishing function of man's natural existence, as well as the representative act of his reason, is speech, and should therefore be the first characteristic from which to estimate his complex relations.

It is the faculty which most evidently, and most generally, characterizes his being. It is not language solely which raises him to a condition above that to which he could attain by the structure and function of his body simply; but language is the means by which other faculties become efficient to give character to both his internal and external existence.

The language of the savage is comparatively well developed for his purposes, while his arts amount to little beyond a bow and canoe, and his laws are comprised in the command of his chief. He suffers from famine and from weather for want of the arts of human life, while he is a ruffian or a slave without law; but he is able to speak as far as he possesses ideas.

The action of language is stamped and worn on every aspect of man's complex nature. It is the most powerful instrument, and that of the widest scope, by which the human mind can be expressed

or impressed, although it is deficient in such appeal to the senses as accompanies the fine arts. Music and color and form convey their ideas immediately, and are received by the soul at the palace gate of pleasure; but the office of words, the greatest of all, for the expression of humanity, is intermediate. Therefore the conventions of time, of place, of race, as well as the measures of individual power, subject it to their special limitations before it can minister to thought; yet because the use of words is common to the race, because it is the first, as well as the universal art of humanity, it is the greatest of all arts. I do not here claim language to be an invention; but that in man's individual use he makes it an instrument to his end. It is not only a growth from universal humanity, but also the voluntary act of every individual.

It meets all souls on the threshold of their isolation. It passes the pale and enters the solitudes of thought. It builds habitations in waste places. It garners the experience of humanity. It strengthens us with the wider sympathies of our race. It enlightens us with the knowledge of all time. It expounds the silent order of nature. It speaks for her in her inarticulate presentation. It is the great recorder of human labor. It can, better than all other arts, place its treasures beyond the reach of the destroyer. It conveys its

benefits to the blind, the deaf, the absent; and this benefit passes down the ages, shaping us with invisible hands, and changing at once the character and the destiny of the race. And how? An exile from Egypt once delivered a divine message to a nation of freedmen in the Desert of Sinai, or a blind man sang, or a philosopher spoke, in the centuries before this era.

The carved work on the pillars of the tabernacle, the beaten work of gold, the majesty of scarlet and blue and purple, in the Hebrew sanctuary are gone. The marble dreams of the Greek are broken and defaced. The holy thoughts of Christian art have a limited reach; but the written word is for the race and for all time.

26. Whatever means of communication the animals may have, without the articulation of language, they are necessarily confined to what is immediate. The absent, the past, is eventually lost to them; what is general as well as what is remote has never reached them. Thus there is no intellectual continuity to their races. Their physical organization, their habits, their geographical distribution, comprise their whole history. Probably the subjects on which the animals themselves are least likely to have ideas, comprise the material of chief value to thought concerning them.

27. By language man becomes pre-eminent.

With all his natural weakness, his transient place upon the earth, his other manifold limitations, by his word he is embodied, and endures as a power coeval with the ages and as the consummation of the mute order of the worlds.

His countenance receives its human character, chiefly from his organs of speech. The human eye is nearly approached in power of expression and in beauty by many animals. Homer speaks of the ox-eyed Juno, without derogation to her august aspect. Majesty, gentleness, pathos, and fury, are all expressed by the eyes of the various ruminantia; tenderness and eagerness in the beautiful eye of the setter; gaiety and intelligence in those of the spaniel and terrier. But the dignity which belongs to the human mouth is not bestowed on any animal. Such lines of resemblance to animal mouths as may be approached in human individuals or races, are expressive of inferiority, and degradation from the true human type.

Yet it must always be borne in mind that physical organization however splendid in its adaptation, however expressive in its aspect, does not confer the powers which ultimately distinguish human existence from that of the brutes.

28. It is difficult to understand the importance that has sometimes been attached to the question if there be other two-handed and two-footed ani-

mals, or if man be alone in his genus. Suppose his race were the only mammalia, or the only vertebrata known on this planet, would the discovery of whales or frogs infringe upon the dignity of man, or his superior dominion over nature? It is by his function that he is forever distinguished from the animal life around him. "By their fruits ye shall know them." The nature of man requires a higher classification than is to be discovered by divergence from the brutes in physical structure, or than would be expressed, were this divergence a thousand times greater than it is.

By noting the result of man's action we can approach to an estimate of his singular being, and thus only; for his extraordinary differences from all other creatures are the effects of causes which are not to be estimated through the direct medium of the senses.

These causes do not lie in his natural life, however that may be adapted to their development. Man is not what he is by reason of his body, any more than a judge is a judge by reason of his gown. Deformed men supply the deficiency in the usual organs by various adaptations.[1] The

[1] Massieu, the Abbé Sicard's deaf and dumb pupil records in describing his recollections of his uneducated childhood: "I knew the numbers before my instruction; my fingers had taught me them. I did not know the ciphers. I counted on my fingers." Quoted in a paper on "Traces of the early mental condition of Man," by Edward Burnet Taylor.

deaf mute speaks by his hands, the blind man reads by his fingers, the man without hands is still an artizan by means of his tongue, or lips, or toes. And it is generally true that classifications, which depend solely on appearances are insufficiently stated for philosophical purposes.

29. A classification of animals by their instincts would be curiously different from that by structure. For instance, the building animals are by no means those that have the best instrumental organization. The lower monkies have a rudimentary thumb, and the higher apes have a thumb longer than that of man. Now it is the action of the thumb which chiefly adapts the human hand to works of skill. But the quadrumana use the hand with the thumb beside the fingers on most occasions, or at least on many occasions, when a man would use the thumb in opposition to the fingers, and thus they lose the precision and power of nice direction which appear in man's hand, or rather they do not develop it because they do not require it. The circumstances of their lives have never induced them to undertake works of skill.

The elephant uses his wonderful finger solely for prehension; while the building animals are obliged to use organs which are structurally inferior for their ingenious purposes. The bird makes a hod and a various building tool of his bill, while he smooths the inside of his nest by

pressing his breast around against the walls. The beaver builds with his paws. The organs of ants, bees, beavers, and birds are sufficient for their purposes, but it is evident that the plan of the hand and the finger are yet better adapted to building and to works of skill. So that monkies and elephants are structurally capable of a great deal that they never have accomplished.

30. As structure does not make artizans or builders, neither does it make speakers. The spread of the nerves and the adaptation of the mouth and throat to articulation do not afford reason sufficient for man's speaking. Did a parrot chatter the whole vocabulary of mankind he would not be gifted with language. Nay further, did he call names and attach simple ideas to spoken words, he would still be as incapable of speech as the dog who begs of his master, and expresses his wants in a score of touching ways. Animals have signs, but they have no proper language. That a close observation of their habits discovers a power of communicating information, which cannot be explained by known facts, is doubtless true; but that such power is not connate with human speech is equally true. Let those who doubt it tell us how to explain to a dog, lamenting the absence of his master, the simple fact that he will return; it is barely possible that by sympathetic actions a similar fact could be communicated by

one animal to another, but no brute could inform another that an event would take place in three days, or in any stated time, because they have no measures, and no method of conventional representation.

The ideas of time and number are beyond the scope of animal intelligence, because they can only be placed before the mind by arbitrary representation. It is said that a crow can count four men; birds generally count four eggs (as has been proved by taking away one, when another would be laid); but as they have no signs for generalization they cannot go beyond an immediately perceived group. So that counting beyond four is an act of thought, though a minor one.

A deaf, dumb, and blind child can learn numbers and such like things, because it thinks, and therefore can form language out of any possible signs. Language represents thought by signs, while signs without thought can only represent immediate facts. Number being one of the forms of thought generalized from tangible things, animals cannot use it when it includes more than a group so small that it is distinctly recognized by the senses.

31. All man's power of reason would not enable him to constitute human society without the development of language. It is this which places the characteristic stamp on his social condition, and makes it to differ from the herding of animals.

It is in the exercise of this faculty that he perpetuates the relations of the family and merges them in citizenship; that he establishes laws and claims rights and determines contracts.

By language he enters into general relations; he lives as a citizen, that is as a being with affections and hopes and traditions beyond his immediate experience; and thence with duties that are borne inward to his path from wider spheres.

He is thus brought to act and feel with organic life in the association of great masses of individuals; he enters into general relations by which he becomes enduring and diffusive, for the circulation of thought between man and man extends him immeasurably beyond his individual being.

Thus his nature acquires peculiar duties and peculiar needs; it has boundless capacities and boundless relations because it can conform to laws which are neither defined in phenomena nor enforced by phenomenal action. And it can feel for objects which are ideal.

Hence his sphere as a citizen and his devotion to his country are not to be compared with the association of the animals in their communities or to their attachment to places.

32. The ways of birds on their nests, of the raccoon in his hole, of bees in the hive, of the beaver on his dam, with all their interesting and curious habits, give no hint of human citizenship.

They are the result of instinctive preference and of convenience, but they have no abstract and lasting bond of thought or feeling.

The transmission of history, the framework of law, the living chord of general thought, belong only to the fellowship of man. He is a citizen by the tradition of the history, of the laws, and of the ideas of his sires; or he may become a citizen by adoption into the life and hope of the country which opens her manifold homes to receive him, and to which bountiful country he renders the duty which would have been engendered by birth on her soil.

Each citizen lives to strengthen her strength on the humble and limited roads of life, or on those high paths which lead to fame. He serves her by his measured step of duty, at home, abroad, in private or in public life, and he is ready to die that her right arm may be strong to restrain unlawful endeavor, and to compel the observance of the laws of freedom.

From his duty to his country, he advances to his duty to his race, and by the expansion which is given him by language he sympathizes with the whole. He is cast down by the wide-spread corruption; he is aggrieved by the individual ruin. He is strengthened by the greatness of one of his race; he is ennobled by the uplifting of humanity. By this expansion of the individual into the gen-

eral life, he survives himself, ages after his lips are mute and his body has crumbled to dust, he speaks and lives among men.

There is another fellowship which he can hold. He comes to be one, not only in association of thought, but in the communion of faith and hope and love, with all who believe with him, who live for the establishment of righteousness, and who hope for the redemption of man.

So that now he becomes a member of an invisible household, one of the blessed company of all faithful people, a citizen of the city of God. This relation to his race depends upon his capacity for perceiving the highest truths.

33. Not only is language the means of developing his extraordinary capacity for federal life, but it brings him to be wrought upon to a marvellous extent by the act, the character, the knowledge of another, of one who may have lived and died in another age and clime. Thus he is the scholar of the world.

If the neck of a buffalo be bowed to the yoke by a creature of superior intelligence to himself, and be then sent back to the herd, no other buffaloes are thereby tamed. But if Prometheus steal fire from heaven, his fellows are instructed in the arts of civilization.

This gives prophetic character to humanity. The growth of knowledge among men is of such

a nature that what is made known to one may become known to all. Hence what is difficult to learn would naturally be first discovered by one, and thence transmitted to many; so that the method of enduing one with deeper and farther vision, that thereby the multitude may be enlightened is in accordance with the universal method of progress among the race. One man discovers what the rest of the world are taught.

Language furnishes the means of a common bond of knowledge and of thought among men; it also affords that by which the civil and national life of man becomes enduring. I quote the following from one of the great students of human history. "The art of measuring brings the world into subjection to man; the art of writing prevents his knowledge from perishing with himself; together they make man, what nature has not made him, — all-powerful and eternal." [1]

34. As humanity advances into manhood, the arts of life make language permanent; hence there arise among men verbal statements which have a power beyond the truth they represent, or the law which they define, which power is derived from their being the recognized code, or associated confession of many. The thoughts and feelings and hopes of men in great and energetic societies return to these forms as to central points upon

[1] Mommson's History of Rome. Opening of Chap. xiv. Book i.

which to place their defences, from which to make their assaults, toward which to gather their numbers from age to age. The nations and societies into which men are clustered would become disorganized crowds of savages without them.

Something that is transmitted from man to man, — the system of a philosopher, a code of law, the creed of the believer, the confession of the reformer, or a Magna Charta of rights, or the National Constitution, — some such stated form is required to bind men into common thought, to collect their aspirations and affections, that they may have enough of a common character to organize in great masses and to have a common action. The restless, out-of-joint condition, of certain nations would be remedied if the whole body politic had a uniform code and symbol of citizenship which could be adopted by the whole. Of this more will be said in a later chapter. The reverence which is felt for these symbols condenses human power by checking its vagaries; and multiplies its force immeasurably by the communion of thought and feeling thus established.

35. Another characteristic of humanity must here be noticed, although it does not strictly belong to the field of language; it is, however, a development of the faculty for representative signs, when that faculty moves by the impulse of human affections and passions. I shall call it the

sacramental faculty. Its first act is the association of ideas and memories with objects which have no other relation with them than the association thus established, such as the national flag, the baptismal water, the wedding ring. The second act is establishing toward these objects a prescriptive rite of observance and enduing them with the sanctities of faith. It becomes faithful to observe them, and faithless to profane them.

36. The federating action of language, important as it is, does not constitute its prime benefit; which benefit is conferred upon the individual. Language enables the human mind to hold general ideas, and notions which cannot otherwise be represented, to place them before the attention and to retain them after they are separated from the first perception, and cannot be presented by an ideal conception. The faculty for forming such ideas constitutes the generic difference between the intelligence of man and that of brutes. It is prime and structural. Language gives it scope; but it arises in the original movement of intelligence. Yet words are required to give the power of movement to thought, the forms with which to invest it, the vessels to contain it; but they do not anticipate the sleeping faculty of knowing. There must be something like rudimentary language which is coeval with the dawn of thought, something which even to the deaf,

dumb, and blind represents its types; and this is confirmed by the fact that the very foundations of language are laid in generalization. Its first utterances represent this special action of thought. Müller says, "The fact that every word is originally a predicate, that names, though signs of individual conceptions, are all, without exception, derived from general ideas, is one of the most important discoveries in the science of language. It was known before that language is the distinguishing characteristic of man; it was known also that the having of general ideas is that which puts a perfect distinction between men and brutes; but that these two were only different expressions of the same fact was not known till the theory of roots had been established..... But though our modern philosophy did not know it, the ancient poets and framers of language must have known it. For in Greek, language is *logos*, but *logos* also means reason, and *alogon* was chosen as the name, and the most proper name, for brutes. No animal thinks, no animal speaks, except man. Language and thought are inseparable. Words without thought are dead sounds; thoughts without words are nothing. To think is to speak low; to speak is to think aloud. The word is the thought incarnate." [1]

Let us pass from this subject with the reverend

[1] Last lecture of Müller's first series on the Science of Language.

recognition that whereas language is the means by which all visible human relations are shaped into forms of permanence, power, and beauty, so it is its yet greater office to represent general ideas and universal truths, — truths which belong to eternal being.

37. The second human function to be considered, is the faculty for proportion, or the relation of forms. It may be treated under three heads thus, Proportion:

The relation between general forms by themselves — Pure Mathematics.

The relation between general forms and phenomena — Applied Science.

The relation between forms and specifically human ideas and purposes — Art.

The field of proportion includes both phenomenal forms and typical forms. It is at once the key to the secrets of nature, and the rule which gives character and power to all the visible work of mankind. Most of the organism of civilization, as well as all science and all art, are based upon man's power of conceiving and referring to general forms. Numbers, figures, and symbols are the means by which the mind informs itself of the unapparent facts of the universe, and reports them in formulas for its own use. These same means are the highways for most of the commerce of life, which sooner or later does not fail to pass over the bridge of number.

The following of sea-coasts and river-courses does not give the mariner the true knowledge of geography. The simple observation of the movements of the stars, did not fill the Chaldean's mind with astronomical conceptions. The discovery of new chemical effects did not reveal to the alchemist the law of definite proportions. Nor does courage in the battle-field instruct barbarians in the art of war.

In all these things men must think, must form types, before they can either acquire the higher knowledge or act with their best efficiency.

The relations between general forms belong to pure mathematics and need not be considered here, except to note three classes into which the subject falls. The proportion of geometric figures is the relation of proportioned units; the proportion of numbers is the proportion of equal units; algebraic proportion is the proportion of unknown quantities, by bringing them into relation with proportioned units and the proportions of equal units.

38. Both figures and numbers are ideas which the mind generalizes from its experience and perfects into forms of its own. Number represents a plurality of equal units, as is seen by addition and subtraction, which make no account of differences. That is a complex conception, it is something more than pure number which admits

of variation in the units. Hence each number is one of the pure types of the mind; and is proportioned by every other number.

Our mental types are only approximations to natural facts. The mathematician's geometric figures are not found exactly described in the forms of crystals, or in the motions of the heavenly bodies. Yet the science of both is founded upon these conceptions, even though they are not sufficiently complex to express nature's whole result.

The conceptions of the types of physiology lose in definiteness as they ascend from the individual to the species, the genera, and the classes.

The concrete image disappears little by little, and at last nothing is left, probably, but the representative word. In common use the words "animal" and "vegetable" seem quite distinct; we think of them as represented by different functions of life, without realizing that all of the lower functions is included in the life of the higher. The conception of an organism with a head, in distinction to an organism without one, does not readily occur to the mind, even if it ultimately prove to be the best definition. I doubt if the image of a backbone rises before the mind of the naturalist whenever he speaks of the vertebrata; he continually uses general words, with perfect accuracy, without the need of the long process of attention once given to defining them. In most

classifications the mind does not call up data for its conception, but depends upon words to represent facts, which have passed away from the attention, and which, in the case of unreflecting people, have never been verified or defined.

39. After the mind has drawn her own types from the forms of nature, she learns to identify them with the types of proportion which have been previously searched out and perfected. This will be further spoken of under another head; but it is well to notice here that all the adaptation of physiological structure to mechanical action and tension are to be comprehended by previously known laws of proportion. Before men understood the systems of organic life they knew the properties of the circle, the radius, the ellipse, the arch, and the keystone, the lever and the pulley, possibly the movement of the ball in the socket. The ball-and-socket joint is now used in the drilling-machines of the miners, in instruments of mensuration, and others. It is not unlikely that it was used in other ways before it was discovered in animal structure.

40. The faculty for proportion further enables the mind to use knowledge which the senses obtain from things beyond their natural range, and which when obtained cannot be conceived on their natural scale. Bodies a hundred miles high as well as those less than a thousandth part of an

inch, are beyond the scope of imagination. All forms are presented by the mind in its conception on a scale which is given by the experience of the senses. The revelations of the microscope and the telescope would be useless, did we not possess a representative faculty which translates their inconceivable facts into a standard scale of such measure as we see or touch. The understanding discovers their true proportion, but the imagination, which is a feeble faculty, and wholly limited by the experience of the senses, and combinations of that experience, cannot assist the mind except on its native ground.

41. In considering the knowledge which man acquires, through the power of representation, by a scale extraordinarily changed from the fact, it is well to notice the character which distinguishes maps among the other means of knowledge. They are not arbitrary signs, like alphabets or figures; they are typical forms of a specific character, without either symmetry or beauty. No stretch of the imagination can consider them pictures. Perhaps the peculiar effect of dullness which they give the mind, when not interested in them, arises from the remoteness of representation in which they disappoint the imagination.

Yet the results of the long-continued action of the great forces of nature are expressed in their shapes; and the history of humanity cannot be

told without them. They form the surface on which it is projected. The life and thought of humanity have a multifarious correspondence with the line of coast, the course of rivers, the mountain ranges, the islands, the deserts, the prairies; and make their outlines bright with the record. All these irregular forms, the product of spent earthquakes and subsided floods, have borne a part in shaping the career of man. There are rivers and mountains, there are seas and shores, seats of ancient civilization, and wastes of wilderness, whose features are feebly sketched by maps; but chords of living thought vibrate along the lines. The homes, and the wanderings of men, their highways, the scenes of their wars and their desolations, lie before us; and glimmering through the record of the past, the hope and the prophecy of the world.

42. Although the commerce of thought requires that the facts of nature be all adapted to one scale of conception, and raised or reduced to the accustomed level of the impressions of the senses, yet the mind possesses no knowledge more exact or more demonstrable than that of many of the phenomena which lie beyond the immediate cognizance of the senses, and which its conceptive faculty can only compass after their scale is changed from the fact and accommodated to the imperfect action of the imagination.

43. Under the same head, of the adaptations which thought makes to supply the deficiencies of its instrumentalities, lie those ingenious contrivances by which the conditions of sound are made visible. The ear perceives the proportion of its vibrations without knowing their relations. It becomes necessary that the superior demonstration of the eye should be added to the facts of the hearing. By various methods the waves of sound are made to depict themselves, until the invisible harmonies of music leave their traces in forms whose visible symmetry displays a beauty in the viewless movements of the air, that was not known to exist until the last generation of thinking men discovered it, and showed that music is a beautiful thing to be seen as well as heard.

44. The limitations which the bodily powers erect about the mind are not degrading, although to some men it has seemed as if thought were like a captive toiling in fetters. But she has her own methods of surpassing their bounds to compass her ends. The more the subject is considered, the more will it be realized that the experience of our animal life stamps its impress upon thought, even in her most retired vocation. Even so general a thing as number shows it. The decimal system of numeration was doubtless determined by the number of the fingers and toes. But there is no cause for discontent. The impressions of

the senses afford to thought the inestimable advantage of terms for its definition. They furnish the forms from which she gathers her types and not seldom the very material of which she moulds her deathless work. Even when the mind turns back from her transcending toils, and busies herself with dust and stones, she stamps them with her own royal signet and endues them with something of her own vitality.

Thus every trace of man possesses a matchless interest, and bears upon a variety of subjects. His humblest work betrays the characters which belong to him alone. The stone spear-heads and flint knives cut by the rude art of primeval men are precious to science. Even now the finding of an axe-handle or other tool in the wilderness reveals that something more knowing than a raccoon or a beaver has passed by. The hand of man is betrayed by its purpose, which transcends its natural force and gathers to itself exterior power.

45. Not only does the faculty for proportion enable man to surpass his natural knowledge but also to exceed his natural strength.

I shall not speak of the astonishing results which are reached through mechanical forces, by proportioning weight, power, velocity, and distance, but will select one development of the subject in a different direction.

While man is the weakest of all animals in proportion to his size, he acquires a physical power by the organizations of number, which makes him the most effective animal force on earth. The bound of lions, the rush of a pack of wolves, the tumultuous advance of herds of cattle, cannot approach in result to the skilled action of warriors, and the march of armies in proportionate numbers, in harmonious action, and in concerted forms. Without this order, the arms in their hands are merely encumbrances, as is seen in a demoralized force. The disappearance of one nation, or the predominance of another, has often owed its immediate circumstance to the invention or the use of a novel form of military tactics. There is thus given to the material life of men a character of unity, and therefore of power, which is truly admirable. Men are like grains of sand in their individual forces. They stand like adamant when they are crystalized by thought. They sweep all before them when they are impelled by the order of the human mind.

The flight of wild fowl after leaders, the migration of ants under the supervision of superiors, the direction of a herd of elephants by its chief, are to be referred to a class of facts in animal life which, while they bear a strong analogy to humanity, are governed by essentially different characters. There is the instinctive arrangement

of multitudes for temporary convenience and necessity, without proportion of numbers, or the direction of their action by fixed and stated rules, or the execution of movements by regular forms. The clustering of animals is a flock, a herd, a swarm; the gathering together of men, if it be intentional, is an organization, or it will become one if it be permanent. In the one there are no arrangements which reflect figures, numbers, laws, ideas; while the other is interfused with definite forms that always determine unity of purpose and action in the organized life of humanity.

This line of observation might be followed further and in various directions. The formal life which develops around man's social existence is not only a means of its power, but a confirmation of its dignity. Many of the conventions of life, when they exist in their integrity, are the requisite expression of man's noblest relations. Through the medium which they afford, the wonderful current of humanity comes to be ruled by general truths, and its shifting surface to be colored by the reflection of illimitable thoughts.

46. Art is the third function of proportion just named. The sphere of poetry will not be touched in this chapter, as it will necessarily be considered in a later one; the rules of art in language are some of them the same with the rules of art in color, sound, form; but language has such vast

representative scope, as well as such essential differences from the fields of the eye and ear, being itself intermediate and conventional before it is wrought into the forms of the thoughts of poets or rhetoricians, that its art cannot be thrown into the same subject with theirs.

I shall therefore define art to be the act of proportioning forms and of relating them to thought and its types. It may be divided into two spheres:

The proportioning forms to useful purposes.

The proportioning forms to thought.

Or a more discriminating classification may be made thus:

I. Art subserving physical needs.

II. Art representing natural objects, imitative or representative, according to its scope.

III. Art representing thought and its types.

It is seen that these three spheres of art may be comprised in one subject, as in a building. We may pass over the useful arts (except as they appear in connection with the others), because the relation between their efficiency and the proportioning of their forms is undeniable.

47. It becomes necessary to enquire in what beauty consists; beauty being a prominent object of pursuit in art, their consideration will largely occupy common ground, and it will not always be necessary to distinguish to which the predicates

belong; beauty and art are neither identical, nor is beauty by any means the sole object of art study; but they frequently cover the same perspective, and can thus be often looked at from the same point of view and studied by the same rule.

The common definition of beauty, as the quality in objects which gives delight, is insufficient because it would thus depend solely on the scope of faculty in the being delighted. Many writers have been much exercised because a purely relative character was thus given to beauty. It is indeed true that beauty is entirely relative. It is relative in the first place, to our natural faculties. It is relative in the second place, to our mental types. But those types are real and immutable.

Now there must be a definite standard for the thoughts and feelings of beings who feel and think reasonably; and there will also be a reason discoverable for the instincts of animals and for the enjoyments toward which their conscious existence turns. We may, in short, find a reason for everything except the human imagination, when it is allowed to be lawless and to depart from the limits of truth. The rules of beauty will therefore be now sought in fixed principles, based on and proved by natural facts; and while we bear in mind that our perception of beauty is more or less dependent, from the insufficiency of

our faculties, we may disregard the exceptional cases of abnormal and degraded tastes, like those of Hottentots, or such as occasionally display themselves in the transient fashions of European nations and their descendants.

48. Beauty is such proportion as is perceived by intelligence and interests it by sympathetic conditions — by conditions within the scope of its appreciation. It is not necessary that the mode should be understood that the effect may be experienced. The animal sense has, of course, never conceived the idea of proportion.

This is a disputed proposition, and the whole ground of art is also debatable. But it is impossible to avoid it in any general consideration of human nature.

The difficulties of the subject are enormously enhanced, because art has so often been passed over to the domain of the imagination, and beauty has been placed in a transcendental arcana, their rites to be celebrated only by the gifted few, their oracles announced solely by the illuminati. According to these doctrines, even nature herself appears to have but a limited roll of citizenship in which to include her votaries, the rest of the world being without initiation into her properties, aliens and barbarians in her realm.

But the progress of thought has made havoc in so many oligarchies that we may hope that the

time is near when the laws of reason will be established in the field of the art faculty. Nor will the multitude, who are alive to the effect of beauty and the power of art, afford many to lament the decline of the empirical criticism which has so long sought to forestall universal human judgments.

49. The principles here brought forward have been long asserted by men of thought and observing power; but they have been thrown back from their due recognition by the writings, often impassioned and eloquent, of those who claimed authority in matters of art by right of an inherent gift, and who forestalled the decisions of our own judgment, without making any appeal to our reason, and the considerable aesthetic discernment which has often accompanied these claims upon our credulity has given them an undeserved preponderance over writers who addressed themselves to the understanding.

The great name of Burke belongs to what I believe to be a false theory of the Sublime and Beautiful; yet his work is to be respected in so far that he bases his theory upon natural facts, and recognizes the claim of the human understanding to be addressed upon the subject; while other writers have assumed that the power of art, both perceptive and executive, was intuitive and inexplicable, and lay in the development of a

unique and autocratic function of certain individuals.

50. They who believe that there is reason in everything, and a reason for everything, will not always consent to rest under the dictation of those specially gifted with imagination.

They ask why the influences of art reign over the human mind more or less from the cradle to the grave, through the whole range from savage to civilized life; why in one form or another, they rise above material wants to be man's delight, stimulus, consolation, or perdition, as the case may be. No legislation, no code of morality, no outbreak of fanaticism, is long able to stifle man's demand for music, color, representative form. No barbarism extinguishes it. No modern philosophy makes it obsolete. Therefore it is unreasonable to ask us to believe of art, which is as universal as any of the humanities, that its rule is arbitrary and its practice empirical, or that its sphere is enclosed by that faculty which is least improved by training, and is the most self-limited of the human mind.

Let us observe what we see with our eyes and hear with our ears in the sphere of art, instead of listening to those who tell us that we see and hear something in the imagination, and we learn that simple truth is more beautiful than the imagination's wildest flights.

51. Beauty bears the same relation to perfect proportion that morals do to perfect righteousness. Beauty is such proportion, and morals are such righteousness, as can be appreciated and potentially developed in human experience. Therefore beauty is not intrinsic, but depends upon our faculties for its recognition. It is, in fact, our translation of proportion.

The law of proportion and the law of morals are founded on immutable verities, but human perception is incomplete and dependent; therefore beauty and morality are imperfectly representative of what is complete and absolute.

52. The two great laws of beauty are, first unity; second symmetry. As the ultimate principles which govern the proportionate perceptions of the eye and the ear are the same, I find it more convenient to throw the facts of sight and hearing into one subject, and either class will be drawn upon to illustrate the general order, as occasion may require.

The law of unity and the law of symmetry, apply alike to music, form, and color. A third law has been given which has been called continuity[1]; I understand the author to mean appropriateness, or what artists call "keeping."

It is only a wider generalization of unity, and as it enters into the remoter spheres of art, as

[1] Symmetrical Beauty, by Hayes.

related to thought, it need not now be touched upon. It is better to confine ourselves to those points which may be established by positive evidence, and to avoid grounds which involve further considerations, although they can be shown to be covered by the same principles.

53. Unity is the oneness of relation through all parts of a composite body. All the parts are related to each other. The typical conception of the earth, of the universe, of a flower, or a crys tal is a unity. All concrete conceptions are unities; all representative conceptions should be unities to be works of art. The picture of a landscape is a unity; and of a multitude is also a unity. Titian's picture of the Assumption of the Virgin, with its three contrasted spheres, is a unity. It is the one subordinating purport which makes all the variety of a drama or a great poem to appear finally with the impress of a vast unity, even as a river with its waves, its eddies, its shores, its cities, its source, and its entrance into the sea, becomes one mighty thought. The elements of comedy, of tragedy, of trouble, of repose, in fact every antithesis of thought, may enter into the composition, provided they are all held in due relations, while the want of unity in these relations effectually destroys the art character of a subject.

54. Symmetry is the occasional (not the accidental) repetition of the same form. It may be

the same form in the same proportion, as the two sides of the face; or the same form in different proportion, as the markings on the convolutions of a shell.

55. The character of the impressions on the senses of the eye and ear must first be examined, they affording perfect illustration of the universal rule of beauty.

Impressions of beauty are first received in the sphere of animal function. They are literally the feeling of proportion. The senses feel proportion in the waves of sound and the undulations of light before these impressions are gathered into the types of thought.

Musical sound is produced by impulses which are periodic; noise is produced by impulses which are not periodic; in the first case, the ear receives a rapid and regular succession of shocks, in the second case, it receives an irregular succession of shocks. The first gives pleasure, the last is indifferent or disagreeable.

The seven colors of the spectrum, are of themselves the seven most beautiful colors. A pure color gives a sensitive eye a delight which belongs to the animal nature, as is seen by its attractiveness to babies or to very feeble or demented people. In the order of nature the plumage of birds is heightened in color at the breeding season; black turns to blue, gray to red, and an inexperienced

eye often fails to recognize the brilliant suitor of the spring in the sober feathered bird after his moulting. That beautiful colors attract all sentient creatures is becoming thoroughly proved by the close observation of the habits of animals by naturalists; observations as exact in detail, as they are complete and splended in theory.

The seven colors of the rainbow are produced by seven different ratios of the undulations of rays of light; when the reflecting surface returns rays with a uniform ratio a prismatic color is produced; when rays with different ratios are reflected, mixed colors, like gray or other impure colors, appear. White is the result of the complete spectrum in just proportion.

The pleasures of the senses of seeing and hearing are therefore produced in their highest degree by the due repetition of the same undulation: thus symmetry is the cause of the pleasure. Waves of sound and undulations of light which are symmetrical, give symmetrical tremors to the auditory and optic nerves, and produce delight.

The senses of taste and smell and touch are doubtless dependent for their pleasures on the forms of what affects them. But the scope of these senses for obtaining a knowledge of proportion is reduced to the minimum by the necessity of immediate contact in order to perceive their objects. We do not smell a rose, but the essen-

tial oil which escapes from a rose, and comes in immediate contact with the sensorium. It is unlikely that proportion affects these senses in any other way, while the vibrations, which are perceived by the eye and ear, have a sweep which affords it a vast field. Rays and sounds must both come from a due distance to be effective. Moreover musical sound has not only the symmetry of waves in each impulse, but the symmetry of successive periodic impulses. The pure color of the spectrum has not only the regular undulations of each ray, but the uniformity of all the rays of that color. It is true that we never perceive a single impulse of sound, or a single ray, but, could we meet such by itself, it would be musical or pure, as the case might be. Now musical sounds are produced by from forty to four thousand impulses a second. The violet ray is the result of millions of millions of vibrations per second, numbers beyond the power of the imagination to picture. A vast symmetry is thus opened to us by the eye and ear, unknown, yet exquisitely felt by both rational and irrational animals.

56. Beauty being relative, proportion must be adjusted to the eye and ear, to be in the first place perceptible, or being perceived, to be agreeable. In the lights of the spectrum there are, scattered along, black lines which are probably

invisible rays. It is known that there are rays in the scale of color beyond the violet and red, which are obscure to us.

Human ears show a variety in their power of hearing the extreme notes of the scale of sound, seven or eight times as extensive as that of color. The higher sounds are inaudible to certain people who are discriminating in the middle and lower tones; in like manner certain persons are color-blind to a greater or less degree, not discriminating hues that are distinct to other eyes. These defects are individual; but it is understood that the general scale of both color and sound are limited, not by the real scope of vibration of their medium, but by the capacity of our nerves; and that effects more extensive than those we experience, but kindred to them, are lost to us. Herein is showed the superior scope of the human understanding to that of the imagination. The understanding, acting in obedience to established laws, discovers what the imagination, without either law or check in its operation, except inherent incapacity, fails to picture or to cast any light upon.

Therefore we must submit to the knowledge that the direct pleasures of the eye and ear cannot be enhanced or enlarged by the imagination, although science has demonstrated that there is a radiance that we cannot see and a music that we cannot hear.

57. It was noticed, some pages back, that methods had been discovered by which musical sound may be brought within the estimate of the eye, more varied and intelligent than that of the ear, because the judgments of the ear are given by one scale only, namely, that of the vibrations of the impulses of sound; while the eye has not only the limited range of color, but also the vast scale of its depth and shadow, technically, of values, and the boundless field of form; these again governed by and led into new combinations by perspective effects — all these make vision the fitting symbol by which language most frequently expresses intelligence.

The shape of musical vibrations is made to appear by covering a vibratory surface with water or sand. When a musical note impinges upon a sounding board thus prepared, the yielding material is thrown into geometric shapes of exquisite beauty. They are often identical with the patterns chosen in ornamental art, also with the markings of seeds and shells and other of the beautiful mathematics of nature.

Thus as has been already said, music is also beautiful to be seen, and we are taught, not by the imagination, but by practical experiment, to conceive faint types of the glory of symmetrical form, which plays unseen through the air when it is filled with music.

58. Art is adapted by study, and beauty is inherently related to the capacities of the beings who perceive them; therefore we may enquire for the natural rules by which these effects are governed. First. They are limited by the speedy exhaustion of the nerves. A monotonous musical sound soon becomes distressing. A single color universally diffused would be painfully wearisome. The restlessness of the eye is a consequence of the feeble power of the retina, which seeks repose in change. It is well known that if the eye be too long fixed upon an object its form will re-appear in its complementary color. So that variety is a necessity of the healthy eye. Yet we can understand that we are losers by our physical need of change, and that we may thus miss sublime effects. The second rule is that the pleasures of the eye and ear require that impressions be exciting without being irritating, and soothing without being exhausting. The purest colors give the most delight, although the eye needs the repose of neutral tints; and also that the contrast of color be not too sharp, and that the harmonies as well as the individual beauties of color be respected.

The gold of sunset clouds, the blue of tropical seas and skies, the purple of mountains, many of the flaming reds of plumage and flowers, are neither harsh nor glaring. The dull orange and brick red of some lilies are impure colors; the

ugly crimson of the dark peony is not a pure red, but is altered with a purplish hue. Even such colors might be enhanced by contrast or purified by complementary colors near them; as is often found in natural effects. The hues of parrots are often disagreeable because the laws of complementary color are not always observed in their plumage. Woodpeckers and humming birds and some varieties of pheasant are at least as brilliant, and yet are not so tawdry. The plumage of birds is unquestionably adapted to attract their mates, as is indicated by the heightening of color at the breeding season. The doves and most of the warblers are distinguished by the delicacy and soberness of their hues (which are doubtless a means of protection to them by rendering them inconspicuous); taken in connection with the melodiousness of their voices, a peculiarly refined organization is indicated, while the senses of both eye and ear of the parrot would seem to be coarse and vulgar.

Some animals are annoyed by exciting colors. Cattle often become enraged by scarlet. This may be because it is near the color of blood, which is offensive to them, or because the nerves cannot bear the effect. Red is the most exciting color, blue the least so. Red has the greater power in photographs, blue the less. Red requires the most light to be effectual; in the twi-

light, scarlet flowers turn black some time before those of a blue color fade out. These facts indicate a correlation of effects, which may eventually be based on the same ground. Instead of being consigned to the categories of a mysterious or fantastic aversion, these choices of color by animals will be seen to be governed by some delicacy of feeling susceptible of reasonable explanation.

The effect of sound on the nerve is equally dependent on natural causes. Harsh sounds being of unequal impulse, the ear can less easily bear noise than music of equal volume, but of which the impulse is periodic.

59. The singular power of the human voice over both men and animals has often been noticed. Now the human voice has extraordinary power of musical vibration in proportion to its strength. It is stated that a note of it has been known to shiver a glass vessel.[1] An instance of a different kind shows the power of rhythmical vibration. It is related that some years since a suspension bridge over a river in France broke under the measured tread of a body of soldiers, which gave a steadily increasing vibration, producing a strain manyfold greater than that of the mere weight.

Thus the moderate tone of a true orator will be distinctly heard by a vast audience, who will

[1] Miller's Elements of Chemistry. Part i. p. 129.

lose the significance of what is shouted by an inferior speaker. The great difference is in the quality of the voice.

The charm which the human voice exercises over animals, and which is a most important instrument in their domestication, is doubtless due to its power of thrilling the nerves. It is curious to observe the length of time that wild animals, a snake, or a squirrel can be detained by persuasive conversational tones. And the extraordinary power which children and simple-minded people often possess over their brute companions, probably comes in a great degree from their habit of talking to them, and telling them things which more intelligent people know that the animals cannot understand; but the sympathetic tones have the desired effect in giving them the control of their feelings.

60. The simple impressions of color and sound undoubtedly afford animals the same enjoyment that they do to human beings. In some cases it is doubtless more intense. They have also some appreciation of beautiful form, and of graceful motion. A high bred horse or a grayhound exhibits as unmistakable a delight in the elegance of his shape and movement, as a peacock does in the splendor of his tail. But animals are generally insensible to all proportion except such as acts immediately upon the senses. All relative

beauty is lost upon them. They do not notice forms which are exquisite to us. Their enjoyment of music is probably confined to the simple effects of melodious sound and cadence; though this may be questioned, as they may enjoy to a low degree, what they are incapable of producing.

61. Plato has pointed out this final distinction between the sounds and motions which express the joys of animals and of men. Animals show in theirs no perception of order and measure, while man marks in his the proportion which is perceived by his reason, without his full understanding. Music and dancing express the rhythm which he alone discovers. In other words man relates sound and motion to types which animals cannot conceive. The songs of birds are but melodious voices and musical sounds, while music is composed of three effects, not one of which can be produced by animal capacity. These three are time, tune, and harmony; time, which is the marking of proportionate duration; tune or melody, which is the stated succession of related notes; harmony, which is the lawful combination of various sounds.

62. Rational perceptions relate their objects to types and in this are connate with thought. But this great distinction holds them apart. Thought is more or less conscious of its process, or at any rate its process can be noted to a degree by the

understanding, while the mind is entirely unconscious of the REASON of these perceptions; and it is only discovered by the long labor of the understanding. The complete perceptions of music — not mere musical sound — the beauty of proportioned lines and masses, as well as of the finer harmonies of color are rational, but they do not necessarily subject themselves to the understanding. They should not therefore be degraded in rank, and classed with mere feelings, or even imaginations. They always depend on the relation of their subject to rational forms.

[The French word "raisonné, effet raisonné, ligne raisonné," is not expressed by the English "rational" with its associated meaning. We lose considerable power of close expression, because we have no equivalent for it. Perhaps the cause of deficiency may be found in the subjective habit of the English and Scotch philosophical mind. The French apply "raisonné" to material things, while the nearest we get is "proportioned," which does not necessarily imply the act of the human mind, the most important element of the definition.]

These perceptions are recognitions of the reason; judgments which bear the same relation to the science of proportion, which what is often called common sense does to the science of logic. A good ear need not know that a musical phrase

can be represented by a mathematical formula to recognize its correctness. A man can reason justly without knowing that his conclusion can be demonstrated by a syllogism.

Yet none but a rational being can produce proportioned effects. I have heard two English bulfinches who had been trained to sing one phrase of a tune. The effect was charming, but it was not music, only an exquisite imitation. The brains of the little songsters had heard, but had not understood the human idea of the rhythm and melody.

The delicious sounds of the Aeolian harp are wanting altogether in the three principles of music. The melodious voices of certain birds approach measure, but do not accomplish it. The wild music that is transmitted through generations of slaves has precisely those deficiencies which characterize their whole status. It has no law. The swaying of the time, the irregular surging of the melodies, the rambling character of their choruses are like the forest winds, or the rush of waves, withal that they are often of exceeding sweetness and purity of tone. But the defect of measure renders this music something less than rational; although the same voices are capable of good musical attainment under training.

63. We will now observe some natural effects

which are beautiful, and note that the effect is always the result of special proportion.

We may then make some inquiries for the reason of art, and lastly examine some of the causes of art expression, as well as the effects of certain natural facts upon the mind and the animal emotions.

The human body is the most perfect object in nature, and it may be referred throughout to mathematical forms; to such as give symmetry as well as strength. I can only point to them now. The circle chiefly rules in infancy and gives the expression of simplicity and perfection. The oval marks the forms of manhood and implies complex and varied relations.

The dome of the forehead, the eye, where the circle of the iris lies within the almond-shaped opening of the lids, the oval of the face and head, the arch of the shoulders which announces spring and tension, the upper and lower arches which centre in the small of the back, as the keystone of their power, all the varied expression of strength and swiftness, of tenderness and grace, even of thought itself, belong to lines which draw near to the barren figures of geometry. Thus the heart shaped petals of the rose, the oval bud, the globe of the calyx, the circle of the blossom, the ogee arch of the leaf, in the best varieties, the symmetrical placing of the leaves on the footstalk, the

seed vessel, often as beautiful in line as a Greek vase, the departing curves of the thorn, represent an unusual number of regular forms; therefore is the rose universally acknowledged to be the queen of flowers; therefore is she praised by poets and recognized as the choicest, in all symbolism, both sacred and profane.

64. It is further to be noted that as an individual organism is ill-favored by circumstances, it becomes unsymmetrical and irregular. As it increases in power of development, it grows in regularity. The most perfect rose known to Western florists, the Souvenir de Malmaison, shows as it opens a cruciform folding of the petals across the disk. As the pansy is improved by culture its five petals open in a perfect circle. The multiplication of parts by cultivation, as in double flowers, does not contradict the fact that the best growths are symmetrical, for not unfrequently this exaggeration of spontaneous growth develops new points of symmetry. It is as true that the forms of the best races of men are the best proportioned, especially their heads, as that the best crystals are the most geometric. But man has always curious discrepancies. The American Indian has limbs of the finest symmetry, and walks like the king of men, while his head is of a worn out and degraded type. The man of thought with a head of noble proportion has often an ill

developed frame, and moves as if toiling under burdens. But the man with the head lays hold of the physical world as well as the world of thought; while the fine-limbed savage disappears like the snow in spring.

65. No law of proportion is more surprising from its simplicity and its power than that of symmetry. Hence the beauty of crystals; and when the repetition goes on in groups and is carried as far as in snow-flakes, the effect is enchanting. Let the prime form be ugly in itself, it acquires a charm by being duplicated, a greater one by being triplicated; and this rule holds good so long as the eye can appreciate the effect.

It is from the want of symmetry that molusks are so ugly, and it is the exhibition of it which makes their shells so beautiful. A mass of incongruously shaped and colored rubbish assumes a thousand beautiful figures by being simply repeated twelve times around one point by the kaleidoscope. The charm of the reflection of a landscape or other object in the water is derived from the same law. Symmetry bears its part in all the beautiful effects of nature, from shells and flowers and gems up to the human face and figure. The circle itself is the most perfect form of symmetry.

The effect of cadence depends upon its sym-

metrical character. The rise and fall of waves, the beating of wings in long flights, the dip of oars, and various echoes, with a thousand reiterated sounds and motions of nature and animal life, have a charm which is analogous to higher perceptions because they are hints of proportion. Such impressions are doubtless enjoyed by animals as much as by ourselves. But there are conditions to such enjoyments. Too great repetition, as well as too much monotony, becomes wearisome, and there are many degrees of the pleasurable effect.

We find that abrupt and sudden motions are not intrinsically beautiful, except they are rendered so by special relations. The soaring of an eagle, the wheeling of a swallow, are more beautiful than the dropping of a hawk upon his quarry or the diving of a tern. The hop of a robin is less beautiful than the swimming of a swan.

The heightened effect produced by measure on the symmetry of motion is shown by the character which music gives to dancing. But the most terrible duty of manhood enlists its service. The soldier marches to battle by martial music; and those last thoughts to which the funeral march is set are the greatest thoughts, even such as enter into everlasting doors.

66. The impulse of the human mind toward art, which appears not only in the first records of manhood, but in the remains of the pre-historic

man, as well as in the early experiences of children, is probably due to complex causes. Man is impelled by his intellectual function to every mode of expression in order to supplement memory. He also thinks by means of types. Again, art is original, creative work. When man seeks for knowledge he analyses things and generalizes from facts. But in art these processes are reversed. He embodies his conceptions in concrete representation, instead of disintegrating their forms and annulling them in general truths.

67. Another reason is, that in art he declares and emphasises the truths which excite his sympathy. He can only select from nature a few of her facts, and he selects those in which he is most interested. It is a recognized principle that a work of art gains in power as the details are subordinated to the general effect. And further, those works which aim at the noblest character forego a vast number of minor effects. Unity and simplicity mark all the masterpieces of the world. I think that when we behold the works of the giants among men, the first impression is that these giants were children in their simplicity of thought. Our perceptions can give full value to but few things, and for this reason the grandeur of art is far from complexity. It is as little children that the highest art addresses us; and it is with a careful remembrance of the limited power

of human attention that art brings nature into her own sphere.

68. The same law holds good in our appreciation of nature.

Couture says: "Je regardais par ma lucarne, cette nature que je croyais comprendre: vers le soir, les toits, les maisons, tout ce que je pouvais distinguer se noyait dans une belle demiteinte qui faisait valoir les magnificences du ciel; et je me demandais pourquoi à certaines heures, le spectacle de ma fenêtre etait plus beau; je savais que dans le milieu du jour la vue etait des plus ordinaires.

"C'est que, par cette lumière vive repandue partout, je distinguais les innombrables détails de la nature, que cette multiplicité de forme et de couleur papillonait à ma vue et devenait une fâtigue pour mon esprit et mon regard; tandis que, vers le soir, les grandes divisions du sol devenait sensibles, de belles masses d'ombre faisaient disparâitre les détails insipides. Pourquoi ne ferais-je de même pour ce que je copie.! Je chercherai une lumiere qui donnera une grande decision aux formes; puis en eloignant tous les accidents contenues dans les divisions principales j'obtiendrai sans doute, plus de style dans mon dessin. Je ferai de même pour mes contours; au lieu de me laisser dominer par les petites sinuosités de la forme, je regarderai mon modèle

dans son ensemble, et je sacrifierai incessament ces sinuosités pour l'affirmation des lignes simples et mon dessin n'en sera que plus grand ..... Ainsi ..... La beauté des contours, la beauté des masses, comme la beauté des colorations découlent du sacrifice incessant des détails pour le triomphe des dominantes. Cette simplicité, recommandée d'une façon traditionelle, constitue ce que nous appellons le caractère qui naît du simple, comme le joli naît de la variété."

These principles can be verified by us at every dawn and every sunset. They are also seen to perfection in the works of the great Venetians, of the Spaniards, of Perugino, Raphael, and with singular power in the works of the early German masters, dominating over all their admirable elaboration of detail.

It is the first function of art to generalize nature for us; for that brings us up to her finest, broadest, noblest proportions even though we thus lose some of the multitudinous vitality of her being, which passes our comprehension and which a brilliant writer calls, hyperbolically, her infinity.

69. Art is just only when it forsakes a superficial imitativeness for the presentation of important facts and general relations, and for the expression of type. If the scope of art were bounded by the power of imitation, its best material would be wax, and waxwork would take the place of pic-

tures and statues, for thus should we, most easily, be deceived. I repeat, the power of art lies in its wise selection and in its noble emphasis. Puny details made prominent reduce its power, just as meretricious ornaments degrade it.

70. Falsehood destroys art. In nature, nothing can be wholly false, for nature is the product of inviolable order. Her product may depart from the normal development of species, and reach only incomplete and imperfect results; but such incompletion and abnormal condition is a variation rather than a destruction of order, even though we call it monstrous. But in art the human mind reflects itself; its greatness and its incapacity. Man looks at nature in the glass of his thought and finds in her proportions the reflection as well as the suggestion of his mental facts; and he reveals the grandeur of his own mind, or its feebleness, in his translation of her pages.

71. The sphere of art includes not only what is beautiful, but grotesque, ridiculous, even ugly forms. Nature is often ugly; she is at times beautiful. But though she is always interesting to thought, she is not always capable of being brought into the sphere of art, and never can enter it robed in the fulness of her manifold character.

Art being an offspring of nature and human thought, receives its primary rule from nature,

and its function and aim from thought; or, so to speak, its structure from phenomena, its life from the mind of man. So that art claims for its sphere the forms and forces of nature, and the power and expression of humanity so far as it can compass them wisely and well. Art is practically defined, its existence is announced, by the types of thought. So soon as the builder relates his construction to general measures, if only to develop strength and power, his work becomes architecture.

The shelters of animals and of savage men are often highly picturesque, and insect structures are generally beautiful in their unconscious symmetry. Moreover the human mind is attracted by their association with the comfort of conscious creatures. The bird's nest, which is often so rough without, so soft within, the wigwam of the Indian, are interesting as simple homes. But when all the parts of a building are governed by proportioned figures, even though their method is not declared, their order is perceived, and it becomes a visible music, a silent proclamation of imperishable forms, of which the recognized effect is beauty.

Buildings are, therefore, the most beautiful objects in the landscape, provided they be governed by just proportions. The sublime features of nature do not surpass the harmonies of noble buildings.

72. But ill-proportioned buildings give greater offence than the most ungainly natural forms, because they do not conform to our perceptions of what the relations of measure ought to be.

Thus a false note in music is worse than the harshest sound in nature, because it violates the law of harmony, and breaks the design of the composer. Natural sounds have only general relations; they do not belong to special conceptions, or systems, and therefore their want of (recognizable) regularity does not destroy any plan. The irregularity of inorganic forms gives no shock to our perceptions, because no symmetry is expected in the forms of matter that has been subjected to the action of various general forces, but so soon as it is appropriated by organic forces, and is protected by a special and individual power, any considerable irregularity becomes a deformity.

73. Wherever the proportion of nature is perceived it is beautiful, more or less. Art has the remarkable function of adapting real effects, so as to produce apparent ones, the accommodation being made to the imperfection of vision.

If the line of a long roof be perfectly horizontal it will appear to the eye to sink in the middle. If the shaft of a column be quite straight it will appear to sink between the capital and the base. To correct these defects builders slightly arch these lines.

Now the Greeks had a singular perception of the beauty of outline; and their adaptation of their works to the perspective of the beholder, gives them a power which is wholly lost in the stone-dead imitations which have been repeated ever since the brief century of their prime. But the perception of proportion is not dependent on the knowledge of rules; for in many cases the mind sees and hears better than it knows. The lovely remains of the Greek builders have charmed mankind for ages during which the secret of their living thought was lost. It has lately been discovered that every form is specially shaped for adaptation to the relative judgment of the human eye. Thus the lines, which give the effect of a singularly perfect straightness, are all curved to compensate for the defects of human vision. Without further entering into architectural questions, it may be well to state the fact that many of the finest buildings of ages when building was a fine art, have been carefully examined, and it is found that their important points are all determined by mathematical relations.[1] One would suppose that the two facts, that these ancient buildings are surpassingly beautiful, and that all their positions correspond to geometric proportions, would corroborate the law of proportionate art. But opinions still differ, and some men still consider beauty

[1] See the works of Violet le Duc. "Entretiens sur l'Architecture"

to be more or less an undefinable mystery and without a systematic law.

74. The old idea that Greek architecture was imitated from the forms of wooden huts and the trunks of trees, and the Egyptian pyramids from mud hovels, and Chinese pagodas from tents, and cathedral arches from the crossing of branches, is now exploded; it was always unreasonable, and must have arisen in the mind from poetic fancy; certainly not from observation. The subject has been well considered by modern writers. But study is not necessary to dispel such errors. Any one in whom the perceptive power predominates over the imagination, will discover that the effect of a vaulted roof is wholly different from that of the pendulous branches of trees. It is only like them as a cloud is like a camel, or a weasel, or a whale. The limbs of trees are upheld by toughness of fibre, and the "giant arms" of the forest is a fit expression of their vast strength. It is simple tension by main force. But balance, not tension, is the secret of power in an arch. The weight is counteracted by lateral pressure. Hence the seeming enchantment by which the stones lie passive overhead. The untaught eye may not understand the reason of the cloud-like floating of the roof of the old Temple church in London, but it justly perceives that the weight of the stone has gone. It does not overhang any more than

the summer cloud, which rests upon the atmosphere below. The outlines of a pile of cumulus clouds make their floating upon the transparent medium beneath beautifully evident by their level lower line. We cannot imagine their sinking like the ragged rain cloud, though we may not realize that it is their flatness underneath which shows that they are supported by the air; just as we perceive that the arch is perfectly firm, though we do not necessarily see that it is supported by side pressure. The builders further lightened the effect of their shafts, which they cut into clustered groups, doing all that they could to lessen the ponderousness of the pillars which were to support through ages the spring of the arches mounting to their rest above us, like the vault of the sky.

75. Not only are all the effects of beauty to be traced to proportion, but we may also discover the key which it holds to expression, or otherwise to those qualities which effect our emotions, sympathies, passions, tastes.

In the following instances the cause is evident.

Elegance, which is the expression of choiceness, is imparted to the human form by small joints and small extremities with fulness of muscles. Such configuration belongs to the few who use their strength in athletic exercises or hunting, without the burdens of labor. A high instep and arch of the foot have been taken to mark an aris-

tocratic race. Water carriers and all who bear heavy loads are liable to have the feet flattened from the extra pressure. Hereditary freedom from the toils of civilized communities will produce this stamp of high extraction on a race. It is especially marked in the wild Arab and the squalid American Indian.

The lighting of the face with pleasure is often noticed. The effect is owing to the contraction of the iris, which is thus heightened in color, and also the enlargement of the pupil which, by the increase of black, enhances the effect of contrast. The flush of color, the dimpling of laughter, the sudden appearance of the teeth, the lifting of the corners of the lips, and of the muscles under the eyes, all increase the variety of color and line, and add to the expression of excitement in the same way that the drooping lid, the depressed muscles of the mouth, with pallor or blue tints about the eyes, give the expression of sorrow. The eye of a cat watching her prey, or of a puppy looking at a plaything, exhibits the same brilliancy from the enlargement of the pupil by the retraction of the iris, in consequence of emotional excitement, enabling the retina to bear more than the usual light.

76. I do not doubt that one charm of leaping and plunging water is from the resemblance of some of its effects to human laughter; and that

for this reason Aphrodite was fabled to be born from the foam of the sea. Homer, Milton, Keble, have each spoken of the "smile of Ocean."

In the midst of the Horseshoe Fall at Niagara, the water, as it passes the dark, glossy band at the top, and descends into the green sheet of the torrent, is torn from one moment to another by a projecting rock beneath the surface, and a flash of foam breaks forth for an instant and as quickly disappears. It is a strange reminder of a smile upon the human face. In lesser streams the rise and fall, the dark and bright, the fleeting eddies, the transient motion, all justify Longfellow's fancy of laughing water.

77. The human skeleton is probably the most repulsive object in nature that is perfectly harmless. It is so, both on account of association and of its relation to general forms. Disease makes apparent the shape of the bones; therefore their appearance is associated with suffering and death. A skull is not more the image of death than a full-fleshed lifeless face, which last is often supremely beautiful. Another cause of aversion lies in the simulation of laughter, which the bare teeth and the bending upward of the ends of the jaws present. The solemnity of death makes mockery horrible, and this effect is increased by the shadow at the back of the socket of the eye, which counterfeits the iris. Custom destroys these impres-

sions, but the aversion to the sight of a skeleton, which is felt by some persons, is wonderful to those who do not share it.

Beside the effect of association and fancy, a bone is ugly, because it is not proportioned to stand by itself. It is adapted to the attachment and support of the muscles, and when bare it is incomplete. The bones of the limbs are slender in the middle and large at the ends, which is clumsy. A blunt termination is uncomely; still more so one which enlarges without ramifying.

The webbed feet of waterfowl are uglier than the claws of other birds. The same rule holds good in most vegetable forms. A gradual diminution is the most beautiful, as well as the most frequently found in nature, for obvious mechanical reasons. The myrtle, the apple leaf, the willow, are of better proportion than the leaf of the tulip tree, which is quaint, but not graceful.

The beauty of a column does not disprove this rule. A column comprises three members. The upper and lower have further relations to other parts of the building, so that standing by itself it is incomplete. In a group of ruins the imagination supplies the deficiency, and invests it with a pathetic character that harmonizes with a certain class of human thoughts. But when it is erected to support a small object like a statue or an urn, it is a misapplied form.

78. The movements of a serpent make upon us exciting and terrible impressions from three causes. The wriggling action resembles the contortions of limbs in agony, (anguis: anguish). The nature of the movement is mysterious. And lastly, it has none of the rhythm which belongs to other animal motion. The first arises in the force of association and sympathy. The second is founded on the terror which is always felt at power which is unexplained. The motion of feet, of wings, of fins, even the swelling and contracting rings of worms, account for the advance of the animal of whose structure they form a part. But the method by which a snake glides is not evident. It is only the extraordinary number, and arrangement and strength of his muscles, truly amazing when compared with ordinary muscular organization, which enables him to do what no other animal could accomplish without limbs. The further horror of the expression lies in the absence of rhythm. Several boa-constrictors brought from the tropics, lying apparently torpid on blankets, will appear at first to be dead, but the eye will soon discover, not that they move, but that they have moved since first observed, like the hour-hand of a clock, too slowly to be noted. And this motion continues without pause or haste. A determinate movement so steady, so long drawn out, gives an appalling sense of power

which it well may, as we know that when the animal seizes its prey, the motion of these same folds will be so rapid that neither then can the eye follow the action. No other animal moves without apparent effort in renewing the impetus, and it is the absence of this impulse which enhances the appearance of craft. The tread of a cat is not so stealthy, or his spring so sudden. The anger of a caged rattlesnake slowly rising against intruders on his repose, has the same expression in his motion, unbroken, steadily increasing, the swaying is without sudden turns, and its steady acceleration gives the expression of that measured fury which ceases to be anger and becomes the deliberation of malice.

79. It will be found that most of the effects of unconscious expression in nature and in art, are to be explained by rules which rise out of the conditions of the subject; and that the varying expression of thought, passion, and emotion, are the natural results of often small, and perhaps unnoticed, changes in the forms and colors of nature, so that those which we cannot explain need not be considered as finally unknowable.

80. In the adaptations of art there is a curious economy to be observed. Good taste will not permit the indiscriminate use of the highest effects of color and form, but requires a special proportion to the occasion.

Now the monotony of a brilliant and delightful color is more tedious than one which is less exciting and obtrusive. Hence when art representation is confined to form, light, and shade it is necessary that the tint be black or neutral, or a sober brown, or even a dull red is permissible, as in the drawings of Albert Durer and others. A drawing in sky-blue, or an engraving in rose or green, would be utterly out of taste. A prismatic color requires to be proportioned by other colors, or the eye grows weary of it; the eye demands a harmony of color or else an unattractive tint.

Further, when decoration consists of the harmonies of color rather than form, as on wall surfaces, or textile fabrics, or tiles and floors, it must cease to be representative, or be so only in a conventional way: good taste discards naturalistic forms. Geometric forms, spots, or figures, like the conventional palm-leaves of the East Indian weaver, are to be preferred to natural leaves or flowers or birds, unless all the life be worked out of them. This may possibly be questioned; but it is true that no fashion has ever lasted long which wove or stamped pictures into its fabrics, or painted them upon surfaces, as mere ornament to material. Even arabesques depart from nature in their whole development of branches; and the flowers, fruits, and birds are thoroughly conven-

tionalized in the best specimens. The admirable wreaths and branches of flowers executed by the Lyons weavers are best seen in an exhibition room; the present French taste is so far artistic that it will not allow them to become the fashion for wearing-apparel.

The most appropriate place for the celebrated pottery of Bernard Palissy, with its lizards and fishes, is in a museum of grotesques or on the shelf of a virtuoso.

81. In Gothic architecture the ornament varies from close adhesion to natural forms to entire conventionalism. The principle always holds good, that purely natural forms are not those best adapted to mere ornament. The geometric ornamentation practised by the Saracens and other builders is a better style than the grotesque naturalism of the cathedrals in the Middle Ages. The essential forms of these glorious structures sprung from the deep root of Oriental thought. But the quaint angels and queerer saints, the imps and unclean beasts, were the parasitic growth of Roman development around a nobler scheme. The mind is often successively impressed with the maturity of power that poised the arches and uplifted the shafts, and afterward by the puerility that lurks in the capitals, and the hideous superstition that worked out the corbels.

There are other points to be observed in the

economy of art; and it might be shown that they are homologous with the laws which pervade every subject of thought; and that the modes which the mind employs to bring any subject before its own judgment and appreciation have universal rules; but it is now time to leave questions concerned with the art function, making only a necessary distinction before closing.

82. The characters which adapt objects to art may be classed under two heads, viz. Beauty and Picturesqueness. [This last is a strictly subjective and very incompetent name for the thing signified, but in the paucity of art vocabulary we must accept it.]

Beauty lies in the recognition of the facts of proportion, and of ideal types. Picturesqueness comprises the qualities which adapt objects to art, and which especially address human sympathies. These two characters are derived from different sources. Beauty is the product of special proportion; picturesqueness results from the action of general forces. One represents the perfection of the subject; the other the varying and interesting action of circumstances.

A cultivated tree and a wild growth will imperfectly illustrate the difference. They combine in various degrees in every art subject, and are equally governed by fixed rules. Hence picturesque is an insufficient word from its derivation;

because it really represents laws of concrete facts which are wholly independent of the codes of criticism.

83. The complexity of the action of general forces produces endless variation that softens and breaks down the sharpness of individual character. Besides the special type of the subject, a thousand influences have modified it, and a thousand minor effects testify to the hand of nature in effecting a gradual but universal change. Hence the ability to give reality to inorganic forms, and vitality to organic ones, depends chiefly upon the noting of the results of general forces upon individual objects; so that the repetition of the forms of nature is false, or of the forms of art subjected to the influences of nature, even if the first one be true. This accounts for the air of dulness which belongs to a handling which is mannered. Mannerism in art shows incapacity, not of invention, but of faithful observance of the variety of nature. No two leaves are alike, no two rocks, no two clouds, no two mountains, no two faces. Certain forms may be inherently the same, like the arcs of rainbows, yet rainbows are various in their more or less perfect development, from the endless variation of the mist on which they appear.

84. In painting a rose or a lily, not only the specific character of the rose and lily must be given, but also the individual variation of growth;

its departures from symmetry which its unequal exposures to light, wind, and rain, and the various other accidents of growth have produced; otherwise it will be nothing more than a botanist's drawing of a type.

Two sketchers may bring home drawings of the same trees, one full of real effects, the other entirely deficient in them, though not differing in the general proportion of the subject. One has observed the perpetual modulation of line which inequalties of the conditions of growth has developed. The more careless eye has not discovered these departures from the original type.

The difficulty of painting water in motion lies in its myriad effects. Not only are the lines of water, both level and curved, beautiful, because they are the geometric lines of natural forces, but its submission to circumstances makes it the most picturesque thing in nature. Water lends itself to a multitude of influences. It is touched through and back again by sunlight; it analyzes the rays in their passage, it often repeats its own color and gleam and shadow, beside all that it newly borrows from sky and shore, so that the hand which gives but a few of its effects is not judged as having wholly failed.

85. The charm of inorganic forms, such as the outline of mountains and the sweep of waves and the curves of clouds, lies in their being the

expression of the general forces of nature. They are often spoken of as irregular, because their regularity belongs to a system of forces too vast for us to trace in the complexity of its results. The figures of snow-flakes are in fact no more regular than the varying outline of boulders. In the one case we perceive the proportion wrought by a special power. In the other, a multitude of forces have combined to give it shape, and one has partially obliterated the action of another. But did we perceive the whole movement of nature, could our minds follow the history and keep in view the relations of every atom, we should see that all effects are regular as the lines of geometric theorems. They seem to us confused because our attention does not discover the lines of the process. We perceive proportion for which we do not account. We call it picturesque or beautiful according to the complex or simple character of the proportion. But at any rate it is only the recognition of regular effects.

Although the working of natural forces is too multifarious for us to trace, our perceptions discover the effect with delight. The lava stream, the abrupt chasm, the wave-worn sweep, the level plain, are all of them the results of a fixed order, and of a regularity which is uttered in the various expressions of beauty and sublimity. The irregular lines scrawled by the hand of a child are

ugly, while in the tracings of natural shapes, even of pebbles, the appearance of lawlessness disappears, and a certain degree of grace is showed by comparison. Irregularity is never beautiful. It is a different thing from natural variation, which is simply the expression of a more complex order than the human mind can compass.

86. The conventional work of man is wanting in the charm which nature adds to beauty by her freedom, and we may say by her humility, for common and humble forms are often more picturesque than those which are of rare and high perfection.

The geometric curve of a reservoir has none of the grace of the shore of a lake, yet the nearer the natural line draws to an ellipse, the more beautiful it is; nature is more picturesque than art, because she displays a more varied expression of order than the human mind could invent, or the human hand can follow.

87. At the same time the general rule of beauty holds good in nature, under limitations to be spoken of presently. It is often remarked that the mountain outline which has been formed by volcanic action alone is more beautiful than that which is worn by the action of water and ice. In the first, the line of force is simple, and in its nearer relation to mathematical forms is found to be beautiful. In the last, a thousand impulses

of force have followed each other, rendering the distinct recognition of any proportioned line impossible, and we therefore call it irregularity.

We weary of formal lines, not because they are ugly, but because they are dull. Geometric forms cannot be ugly ; the dulness is in ourselves, because we make beauty to mean the standard of our own faculties.

Thought and perception faint under monotony, as the retina of the eye and the nerve of the ear do under protracted impressions made upon their sense. Thought wearies of limits that it has surveyed. It forsakes the mysteries that it has explained and advances to other quests. The proportion which has been summed up by the eye and ear, becomes irksome in repetition, unless this repetition be gathered again into unity, thus becoming a new form of symmetry by a special relation of the whole. Whenever repetition is thus authorized by thought or by natural law it loses its dulness and poverty of character. It ceases to be the result of a want of invention or of variety of circumstance.

88. There are degrees of perfection in the general type. The genus homo is the finest type of animal life. But the character of the human face and figure is influenced by so many circumstances, and is the result of so much history, that it is the most complex subject of art. The forms

of humanity are so far moulded by individual life and power that rules cannot be sufficiently elaborated to compass them. The special proportion of head, body, and limb may be considerably varied in the race and the individual, yet the result continue to be beauty. The grandeur of muscular strength, or the elegance of limb developed by a life of freedom without labor, the roofing brow of thought, the grace of love's own curve, the rounded and reposing lines of the female form, whose weight rests upon the ligaments, while that of man is upheld by muscular tension, all are beautiful in their varied sum. These proportions may be considerably exaggerated from the usual standard of humanity, as in the case of the Greek ideal, with powerful effect, but I reiterate the rule, that according to the mathematical character of the line will be the beauty of the subject.

89. It is the perfection of line which gives the surpassing charm to Raphael's drawing. I believe that it will be found that his drawings are closer to geometrical lines than those of any other master; that in his faces, as well as in his limbs and drapery, he has kept closer to the line that has definite relations in itself than any lesser man would have dared to do. It is true that some people find his pictures tame; he is indeed often wanting in picturesqueness, but he alone

among painters has touched the highest, the most exalted conditions of humanity. Others, as Fra Angelico, Perugino, Francesco Francia, have suffused the human face with celestial expression; but Raphael has done this beside. He has not only transfigured its expression, but he has restored its line to a perfect type.

90. The ideal statues of the Greeks are also wanting in this same picturesqueness; there are also to be found people to whom this matchless beauty is dry and uninteresting. But the head of the Phidian Jove, the face of the Psyche, will fill their niches in the treasury of the human mind so long as marble stands to reveal the thoughts of Greeks.

91. When the Greeks sought for the intensity of life and passion they knew where to find it. Although they were more or less ignorant of the action of the muscles, their exquisite perception noted the endless variations of form which they produced on the surface. Hence their fidelity in the representation of those minor facts which give their work its surpassing vitality. In the joints and in the longer sweep of lines there is a constant modulation, not by accident, but always according to the varying purpose of nature. Thus the unfinished form of Michael Angelo's morning is a breathing giant, notwithstanding its great defects of proportion, because of the mul-

titude of facts recollected in it, while many a more polished work has remained as destitute of vitality as if turned out by a machine.

92. The pliable forms of the hair are picturesque or beautiful according to their arrangement, and give scope for great variety of effect. The serenity of Raphael's Madonnas is enhanced by the banded hair; the loose tresses of Titian have the symmetry of a sunny ripple, while the flowing of the hair is an exhaustless means of adding to the picturesqueness of the head. The splendid lines of the Arab horse are in no way concealed by his hair, while the wild and picturesque character of the Shetland pony is greatly enhanced by his shaggy hide. The freedom of nature is delightful because it is endlessly various, not because it is disorderly. It is the dominion of universal order, not immediately discovered to the understanding but perceived in its effect by the faculty of the reason.

93. There is a rule of material beauty in man which is independent of expression; the human form is intrinsically more beautiful, it combines more exquisite proportions than any other natural form; and it will always excite due admiration, even when admiration is on second thoughts overpowered by the want of expression, or by its debasement.

But the beauty of humanity is a fleeting and

superficial part of its whole. The original type is moulded by a thousand influences. Race, family, inheritance, climate, habits of life, history, have each their part in modifying it; while the individual character of the mind, that microcosm of things old and new, places its ultimate stamp on the most exquisitely sensitive and varying tablet in the world — the human face. If we think of the divergence which it shows first and last, and remember that seven, twelve, twenty, fifty, eighty years before, all its varieties departed from that same little mottled, wrinkled type, then so little distinguished individually, the extremes seem indeed wonderful.

94. The subject may be summed up by saying that the forms which are beautiful to us are those of which we perceive the proportion, that those are most beautiful which belong to proportions that we most readily estimate — the simple geometric forms; that such power of appreciation grows in us as we grow in knowledge and skill, nevertheless it does not have its origin in knowledge, but in perception, which, like common sense on other subjects, is a native function, greater or less in all reasonable creatures.

But finally, such forms, to be adapted to the sympathies of men, must be subjected in some degree to the action of general laws, and to the accidents which befall growth; the special law of

each form must be somewhat overruled and varied by universal forces, and thus become picturesque. So far as special and simple proportion prevails the object will be severely beautiful; so far as the general forms of nature overrule such action, it will be picturesque. A Greek vase is far more beautiful than a natural leaf; but we should grow weary of leaves which were as faultless in their type as Greek vases. The ideal forms which are implied in nature, as well organic as inorganic, must be altered by the multitudinous conditions of actual existence before they charm our perception with nature's own spell, picturesqueness; for all her forms, however specialized, are involved in the partial obscurity which results from the obliterating influences of general forces. Therefore the characteristic of genuis is, not only fidelity to known truths, but also to the uncomprehended revelations of truth to the rational perceptions. These are not in any way to be confounded with "inherent mysteries," with the so-called "infinity of nature," or with any product of the imagination or of feeling.

95. I have endeavored to show that the fact of beauty and the power of art lie in proportion, by producing instances. Behind these instances we may find a satisfactory reason why it should be so; that the law is not empirical but may be accepted as rational; and that the eye has more

reason than is evident without study, why at one time to be gratified, and at another to be disappointed and dissatisfied.

The forms of nature are closely related to mathematical figures for this reason. Mathematical figures are forms that have definite relations. The standard by which all forms are measured primarily are the circle and the straight line. These are determined by relations to given points. Now all organic forces depart from definite points and describe definite forms. Therefore so far as we can descry them in their results we descry mathematical effects. The figures of planets and suns, and their movements, being formed by the sweep of universal forces, the definite points are more evident. They are more easily related to human mathematics. Crystalization is readily reduced to mathematics, because its forces have few directions, its determining points are limited. The modern studies into the morphology of plants show a similar mathematical character to every form which is examined, but the mathematics of physiology are more obscure than those of crystals. It is not known how organic forces act to place the petals of a rose in a circle; or to give curves of leaves and seed-vessels their characteristic forms. But the results show that they act in lines which have definite relations. There is further reason that the lines of animal develop-

ment should be mathematical. They are not only formed by the action of forces of development, but they are lines of mechanical action in themselves. They are lines of tension as well as lines of deposit, and the play of the muscle is limited by the bones to which it is attached. The outline of the living body is determined by the hidden skeleton. The highest secret of power in drawing the animal form lies in the observance of this obscure government. The reason that the men and women of Giotto are so ugly, notwithstanding their sincere expression, their honest purpose, and their admirable directness, is because they are drawn so independently of bones. At best, if the bones are there, the ancles appear to be sprained and the joints often dislocated; while the cranial and facial bones represent the lower types of mankind.

The obscure and awful power which impresses the mind in beholding the torsos of the Greek heroes, a power that proceeds like a spell from the terrible fragments which barbarians have mutilated in vain, is primarily founded upon the magnificent rise of the muscles upon the bony structure. Every line of the exterior is subordinated to the inward and governing points.

There are more obscure reasons, such as are connected with the laws of growth, and the deposit of material, which influence the lines of female

and infantine beauty, more rounded than the mature forms of virile strength. The appearance of strength is neither necessary nor contrary to beauty, which lies wholly in typical form. A baby is weak, but its body shows fulness of nourishment and abundant growth; and natural deposit gives lines of beauty as well as does the balance and tension of muscular power, although the explanation of the line be as difficult to reach as the reason which makes the disk of a flower beautiful. But it is just and proper to believe that the human eye, being the instrument of the mind, will be attracted and interested solely by what has meaning; that is, definite relations beyond the simple appearance, although it may lie with the generations to come to give the explanation.

96. The fall of drapery gives a field for exquisite beauty of line; to be filled with added power and expression by the partially revealed forms of the body and limbs beneath. The drawings of the great masters display the amazing care they gave to its study.[1] In them it is seen that the secret of the majesty with which they robed the human form, like all other secrets of art worth knowing, lies in the notation of facts by thought.

[1] Photography has now given to the world these inestimable treasures, which formerly were buried in European museums, or the portfolios of virtuosi.

Nor is the plastic hand of the individual master unfelt in his fidelity to nature. Perugino fastens the drapery of his model in somewhat conventional forms. He keeps the truth that he sees, though the aim is exaggerated, while others, in making their studies, observe the reticence of the natural fall, but always noting the points of departure. It should be remarked that, in some of his sketches, Raphael emphasizes these points more than in his pictures, just as a naturalist insists on the specific characters in drawing his type more than an artist does in giving general effect. Beside the variation which difference of material gives drapery, the handling of these men is characterized as being more or less angular, or in sweeps of larger or less curves, but the points of government are equally to be distinguished.

The like rules are observed in the noble antique drapery. The winged statue of Victory shows the curling back of the folds, like the crests of sea waves, from the rush of her sudden alighting. In the fragment supposed to be a Niobe, a shiver of horror seems to have run along the robes and moulded their sweep. Thus all the powerful work in this department, exhibits in its expression, that it is by truth and by law that it is made beautiful or terrible, but never by the play, or the spontaneity of human feeling or imagination. These technical men remembered that

the structure of drapery is just as definite, and the points that decide it are generally less obscure, than the structure of the skin and muscle upon the bones. The gigantic failures of some modern works lie here. The effect of the figures is mean because the draperies are bad. The draperies are contemptible because they are false, and have not been faithfully studied from facts.

I have made no direct statements concerning what are technically called values in art, although these emphatically display its great law; I must close with reiterating the truth, that though beauty is relative on both sides, first to our faculties and then to their subject phenomena, yet it stands immutable and everlasting in the intermediate type.

97. We now pass to what was proposed as the third characteristic function of humanity; namely, that of law in its proper signification.

Law, in its just definition[1] represents the decree of a supreme power among men, to all such men as belong to its jurisdiction. It issues from a supreme person or body, to a person or persons. The action of law is between rational beings. The origin of law doubtless lay in a command given or a judgment pronounced. When cases multiplied, and one command had many applica-

[1] These definitions are drawn from Austin's "Province of Jurisprudence Determined."

tions, or one judgment met several cases, it became statute and ordinance.

98. Three elements combine to form law. The statute of the law-making power; the duty of the subject; and the penalty which sanctions and enforces it. Each of these implies the other; each denotes one fact of law, and connotes the residue. When a reward is attached to the fulfilment of law, it becomes promissory, and binds the power that ordains it.

It is seen that law must proceed from a power sufficient to uphold it by punishing its breach, and be thus able to sanction its observance; otherwise it would be something less than law. The lawgiver must be supreme, though several persons, or several bodies may be combined in one power, and be required to contribute their several functions to one effectual act.

99. It is further necessary to distinguish the original scope of law, from the divergent fields of thought which its name is now made to cover. The present confusions in its meaning have doubtless arisen from the fact that various objects of thought, various actions, were originally referred to the same category of cause, which have since been distinguished from each other, while the same name is retained to express heterogeneous things. There are times when men refer every function of nature to life; and all phenomena are

supposed to be momentarily acted upon by personality. Nature represents to them an arbitrary will, before the uniformity of her operations is discovered, and imperious, and even opposing, personalities govern the universe, before the vast system of physical forces is conceived. Even when men begin to philosophize they reflect themselves into their subject, and the first conceptions of science are related to, and named by, ideas that belong within the circle of human consciousness.

100. As science has developed, the name of law has been stretched to include the sphere, not only of personal, but of involuntary, of instinctive, and of unconscious functions.

The rules of thought are called laws. Animal habits, and the order of the phenomenal universe are, in common usage, all included under the head of law.

The rules of thought are of necessity. There is neither ordinance nor duty nor sanction concerning them. They always were, and are and shall be; and they cannot be superseded. They are established in the mind by its own effort of attention. Their breach is the annihilation of their subject. Ignorance and folly may disregard them, but they cannot be disobeyed.

The impulse of animal life is not properly law. There is no command given, and such impulse is not disregarded unless controlled by a higher

power. That it can be so controlled is shown by the law which reason establishes over it in man. He controls his own impulse and brings it under law. He masters the natural impulse of the animals that he domesticates, not so much by force as by his peculiar authority.

101. The unfailing sequence of results from forces, the mechanism of nature, as it is now conceived by the scientific mind, is not properly law.[1] The science of nature does not reach any statute or creative fiat. Its pure labor pretends not to include the originating reason or the infinite will within scope of its vision. If there were such a thing as a law of nature, personality would be involved in it, for law cannot be contemplated without a lawgiver to authorize it.

Now the order of nature which is discovered to us is not ultimate. The veil which we perceive before us now may be lifted only to reveal another, as has happened before. The science of phenomena is not absolute; at any moment the student may modify all previous conceptions by a fresh discovery. It is, therefore, absurd to give the name of law to conceptions which are dependent upon the knowledge we happen to possess. The form of law must be fixed by the lawgiver, and not by the receiving mind.

[1] In Hedge's "Reason in Religion," the expression used in speaking of the operations of nature is, "Custom which we call law, which is merely a form of human thought, and not an objective reality."

Nor can we justly speak of law which is dependent on law, unless we can refer the last law to supreme authority.

102. This confusion in the signification of law is one of the difficulties of natural theology. It is justly assumed that law involves the existence of the lawgiver. The point that may be questioned is whether there be law, strictly so called, in nature; if its regularity be not properly described as the order of effects, the rule of forces and of forms.

Had the conceptions in which natural science is now embodied been governed at first by mathematical ideas, by which alone its demonstration is effected, and have thus received their nomenclature from a scientific source, much confusion would have been avoided.

But as thought arose in the self-conscious mind of man, he reflected himself on all around him. The phenomenal universe he called nature, by which he meant generation. The order of nature he called law.

Neither did he distinguish the inorganic world from life, nor organic life from personality. So that pantheism, or polytheism afforded the readiest conceptions in which to embody the various action and function that was manifested in phenomena. Whatever idea Plato held of the Godhead, he still supposed that the apparent universe was a living being.

103. While science justly endeavors to bring everything within its reach to the level of the understanding, it should seek above all things to avoid complicating the definite problems of phenomena with the illimitable ethical and theological questions which arise out of the constitution and thought of humanity.

104. The classification which is often made of the objects of thought, as nature, man, and Divinity, is very convenient. It is true that we can place no final definition between them, and there are certain errors which beset the attempt. If we have any just recognition of the divine universality, we are placed before an insoluble problem, which will come forward later in the subject. Also, man is included, but not concluded, in nature, according to the definition given. Yet we lose some of the most valuable data of thought, unless we are able to consider its three chief objects as subjectively distinct. Unless we distinguish God from nature we are pantheists; unless we distinguish man from nature we cannot attain spiritual truth.

105. I refer again to the definition of nature (pages 31, 32). In practice the term nature condenses and symbolizes for scientific use, the conception of all the immediate powers of phenomena. To the devout mind nature thus represents the executive of that which surrounds and includes

nature. Its term may well be preferred to the bringing forward into mutable schemes and vexed questions, into court and mart, that name which is the fixed and everlasting object of faith.

Nature represents phenomena, with its generating and producing powers, without including the visible effects of human thought, because the mind has ideas which do not appear in phenomena except by its intervention, as well as processes of which nature gives no hint. So that the human mind is the interpreter as well as the scholar of nature; nay more, human thought is the prophet of nature, because it transcends her demonstration. Did these definitions hold good, the scope of the word "law" would be limited to human action.

106. And further still. The thing signified is limited to the manhood of humanity. The time when man is governed by the immediate command of a superior, or when he does what is right in his own eyes, is a time without law. The idea of law does not belong to the infancy of the race or to its savage condition. It is not therefore a universal characteristic of humanity like language, nor so general a function as that of art. Man would be little more than a variety of ape without language; he would be something less than humanity without art, even if it went no further than the production of weapons.

107. The theories concerning a law of nature, which by many of the older authors was supposed to underlie all human jurisprudence, are now treated as baseless by the most careful writers of the present time. The principles of law are founded on the recognition of rights and obligations. These rights and obligations are precisely the most variable of all human conceptions. There is nothing in nature, nothing in animal life, with which they are analogous. The utmost that can be predicated of animals is that they practise habits necessary to the life of communities; and they develop attachments which imperfectly resemble, but by no means fulfil, the measure of the human bond of duty.

108. The facts of history, and the scientific observation of systems of jurisprudence show the germ and the growth of legal ideas to be analogous to the development of all the arts of life, a thing of method and of reasoning process, but not of intuition or of any inherent condition of thought. Law is the offspring of the activity of thought in the experience of associated life, never of its passive introspection. So that in the systems it develops among men, it often represents the most various and opposing principles. Its assertion of duties and rights has varied in every community where it has existed, according to the beliefs and pursuits which prevailed in the time and place.

It is probable that no other product of thought exhibits greater contradictions than are found in juridical systems. So that it is difficult to know where to look for the law of nature, except as men should take the final result of the highest thought — such as indeed has never yet been perfected in the human mind, much less developed in human code — to be the spontaneous intuition of mankind.

Hence the development of the idea of law cannot belong to the infancy of the race. Its abstract forms, its bringing forms to bear on facts on one side, and relating the same forms to abstract notions of rights and obligations on the other, is, in a certain way, analogous with proportion, yet essentially different, because its function is concerned with the human will, both in its institution and in its working. Therefore, without a miracle, both form and substance must require time for even the most imperfect organization.

109. The foundations of all lasting civilization are laid in law; law represents both tenacity of purpose and consecutiveness of thought in the character of the people maintaining it.

The development of the idea of fixed principles of conduct for similar occasions, of invariable standards of judgments on the part of the governing power, of obligations guaranteed by penalties for their breach, and also of defined and defended

rights on the part of the governed, gives rise to the constitution of law which thus informs the minds of men with notions of general obligation. It enlarges the sphere of rights as well as of duties; it is the opposite of despotism on the one side, and of anarchy on the other.

110. Government by law belongs to an advanced stage of the body politic, inasmuch as respect for law requires a maturity of thought in the body of the community, without which its penalties will be insufficient, as well as some power of patience in enduring special and temporary disadvantages for the general and ultimate good.

At times it requires great manliness to realize that systems of imperfect or even of unjust laws are preferable to lawlessness; that almost any degree of bad government is preferable to anarchy; that the most wretched and hopeless communities in the world, the people the most tyrannized over, are those where law has ceased to have any power, and the people are immediately controlled, not by a governor with a conventional form of authority, but by the arbitrary will of the power that is strongest among them for the time.

There is no characteristic that ensures the permanence of a nation like the capacity for maintaining legal systems. Mommsen says, immediately after a description of the frightful severity of the inexorable civil law of the Romans:

"But the greatness of Rome was involved in, and was based upon, the fact that the Roman people ordained for itself, and endured, a system of law, in which the eternal principles of liberty and subordination, of property and of rightful redress, reigned, and still at the present day reign, unadulterated and unmodified."[1]

111. This is the universal testimony of history. Not all the splendors of art, nor all the genius of philosophy, neither the vast commerce, the magnificent industries, the teeming population, nor yet the exceptionally great men of the most glorious nations of old, could save them from becoming the prey of the wolves of Italy. And all men who honor their country, who love its liberties and its peace, may well remember that Syrian and Carthaginian, Persian and Egyptian, Greek and Jew, sank before Rome, — before the nation which was forced to borrow their arts, to copy their literature, to imitate their methods and at last to subsist by sucking out the fruits of their toil; but which in prosperity and adversity, exhibited through long ages one unfailing characteristic, that of a law-observing people.

112. Furthermore, the progress of law is the progress of freedom. Austin says: "Liberty and right are synonomous; since the liberty of acting according to one's will would be altogether illusory

[1] Mommsen's History of Rome. Close of chap. xi.

if it were not protected from obstruction. There is, however, this difference between the terms. In liberty, the prominent or leading idea is, the absence of legal restraint; whilst the security, or protection for the enjoyment of that liberty, is the secondary idea. Right, on the other hand, denotes the protection and connotes the absence of restraint."

113. The most reasonable supposition from the facts of history is, that all codes of law were preceded by times when the command of the father to his family, the patriarch to his tribe, the chief to his clan, represented the whole of human government; at such time all functions centered in one head. The king, or his synonym, was the leader in war, the ruler in peace, the judge who established social order. Such rule is necessarily arbitrary; when its character extends from the family to the tribe, the nation, the empire, it becomes despotism. Not only is the central head a despot, but the deputies which carry out the system at the borders are despots. And the greatest inventions of the human mind for the safety of the race are systems of laws, the product of ages of growth, of struggle, and of thought, of human persistence and fortitude, whereby the conditions of freedom have been slowly developed.

Maine says: "Ancient law knew next to nothing of individuals. It is not concerned with

individuals but with families; not with single human beings but with groups. . . . . .

"There are few general propositions concerning the age to which we belong which at first sight seem likely to be received with readier concurrence than the assertion that the society of our day is mainly distinguished from that of preceding generations by the largeness of the sphere which is occupied in it by contract. Not many of us are so unobservant as not to perceive that in innumerable cases where the old law fixed a man's social position irreversibly at his birth, modern law allows him to create it for himself by convention."[1]

The rights of individuals develop as class privileges disappear. This may be seen alike in the tenure of land, in the extension of political privileges, even in the development of industries.

The habit of the national mind may become so schooled, that the most energetic government, as well as the freest system of jurisprudence, may rest upon convention and contract, not of savages, but of humanity trained through years of hardship and oppression, to develop not only the idea of statute law, for the establishment of social order but the idea of equal rights in the laws for pro-

[1] Maine's History of Ancient Law, chap. viii. Everything of value in these pages on the subject of law, has been derived from Austin's "Limits of Jurisprudence Determined," and Maine's History of Ancient Law.

tection, first, of the community, and then of the individual.

The full argument of the subject would demand a historic retrospection which would be a departure from our plan of seeking the highest relation of man by the indications of his present condition. Moreover, it may be found admirably opened by the authors from whom I have drawn.

114. It is not necessary to revert to those theoretic ages when it may be supposed that men emerged from their eggs, or whatever cells contained the fathers of mankind, and, having selected a dry spot in the recent mud, sat down in convention to settle the use of verbs, proceeding afterward to draw up the social contract and establish a scheme of laws, founded upon the consent of the governed. The armed men springing from the ground sowed with dragon's teeth by Cadmus, had not been more out of the usual order of things, nor their speedy self-destruction more complete, than would have been the case with the labors of these untutored legislators.

115. Beside the laws of the body politic, or proper law, there is a vast and indefinite code of ethics, which represents the government of the social and individual life of mankind beyond the scope of jurisprudence. Throughout the whole existence of man, even into his savage state, there is discoverable his disposition to regulate his life

by other standards than the objects of animal impulse and desire.

This disposition affords the field for the imperfect law of morality which may be described as possessing intrinsically neither stated origin nor defined sanction, except as moralists give it a self-contained authorization, and a sanction in the human conscience; or as religionists attach to it the divine fiat, the name of religion signifying the binding again, the sanctioning of the law. Although by its function it should be as universal as humanity, it is without consistent statute, and hence its systems are varying and contradictory according as they are developed by different thinkers and schools, and are better called precepts. Moral codes are generally the result of one man's thought, though depending on the action of society for their establishment. Thus they have been called positive morality.

This imperfect law has necessarily a personal authorization, because it springs from the human mind. But it has no more fixed standard than human opinion, no more determinate base than human custom, no more definite sanction than human conscience. Therefore it is impossible that it should be represented by an authoritative and universal code in the present condition of human thought.

116. Yet the establishment of some sort of

social and individual law for that field of human action, which lies beyond the reach of statute law, and which shall be supplementary to jurisprudence, is necessary for the protection of society, and is invariably developed for better or worse, in all communities of men. The function for such law is universally developed by the race, and is as necessary to the elevation of man above any and every grade of animal existence, as is the function for proportion to the first and last development of art and science. Without its exercise society hastens to dissolution. The individual loses his power and glory, and becomes an animal, inferior to all other species, for the brutes know not how to attain the excesses of mankind.

117. I repeat. The indefiniteness of the moral law lies in its authorization, in its statute, and in its sanction. Moralists have variously claimed it to be derived from the general human constitution; from the intuitions of the conscience limiting the will; from standards developed from the thought of exceptional men; and lastly from divine personal inspiration. Where civil law exists it is established by a recognized governing power, with a defined statute and a more or less efficient sanction outside the status of the subject, a sanction which in some shape can make itself felt in tangible effect.

But the authority, the precept, the penalty of

the moral law lies within the mind that is its subject, or upon the variable base of human opinion. The moral measure of men lies within humanity, and develops by rules drawn from human consciousness. It cannot be compared with the simple development of animal relations, because remote principles bear upon it which complicate its results. Yet through all its variation it exhibits lines of a vast and distinctive unity, constituting human society a world within itself with the appearance of systematic character, which, although broken and disjointed, does not leave it chaotic in comparison to the world of nature.

118. The want of normal conceptions of rights and obligations impairs the civil codes and imperils the social and political life of nations. The domain of morality covers the springs of human action; and as this self-conscious life of man is only illuminated through man, the race is at times involved in moral darkness.

119. The living consciousness of men, whatever that consciousness may contain, is the standard of the morality of the time, and is the substratum of the social and political life. The moral standard is therefore essentially variable; it abides by the comparative knowledge and wisdom of men, and it partakes the pre-eminently historic character of the race, for history is a notation of change, so that as the consciousness of

mankind varies, the moral standard varies; and a normal development of social and political science, either in thought or practice, becomes more difficult than the art or science of any other sphere of thought. Hence the schemes of morals and the aims of civil laws have differed as much as the thought and times of humanity.

120. When the subjective distinction between morality and religion is allowed, which may well be done in order to avoid confusion, at the same time recognizing the necessity of their interdependence to the vitality of either, it will be allowed that the proper sanction of the moral law lies in moral belief. If it is derived from outside the mind of the offender, it rests upon the opinion and social action of the community uniting in the recognition of such law, of which the offender is, by position or sympathy, a member. Hence a moral punishment is addressed to, and is inflicted by, moral conviction.

121. There is also a special difficulty about practical morality from the extremes of individual variation; and it may be generally stated that the higher the standard of morality presented to men, the more elective, so to speak, will be its action.

Without attempting close definitions, three representative types may be distinguished among men in the presence of anything that approaches to a just moral law.

First, there are those who might be called idealists, did that word represent the class whose aspirations extend beyond the results of practical life, and who are not primarily governed by material interests.

They aspire to live by a completion of law; not merely the law of safety to the state and protection to the individual, but they seek for law which shall permeate every relation of life, and also the interior status of the individual man. They are not satisfied to fulfil the statute law alone; they seek to relate their conduct to universal ideas of right and justice.

The second class of men may be described as those who do not in any way live for absolute ideas. The highest morality that they obtain is that honesty is the best policy. If they occasionally diverge from honesty, they still keep the windward side of the statute. They are often useful men, and not seldom entitle themselves to the gratitude of others. A little unscrupulousness is often one of the elements of worldly success, and every possible human code must leave loopholes which give room for transient and limited departures from rectitude, without breach of the letter of the law.

The third class embraces men who are wholly indifferent to the morals of their time. They are either reckless, proud, and blasphemous, or else

abject and despairing, like devils who believe and tremble. It also embraces hypocrites, unbelievers in the best ideas which govern men. They may look upon morality as the custom of decent society, philanthropy as the convenient practice of successful men; religion as a garment useful for various purposes.

These classifications are of course intermingled and endlessly varied in human character, but the prominent types may be so described.

122. An unsystematic enumeration of the several moral codes, according to their field of action, may be made thus:

The law of private virtue.

The law of social honor.

The law of patriotism and loyalty.

The unwritten laws of equity in the halls of legislation and of justice.

The law of nations among independent communities.

These are generally founded upon the recognition of a federal bond between man and man, and finally upon a due subjection of human action to the influence of the immutable principles of goodness, justice, wisdom.

Statute law may represent more or less of moral law, just as moral law may represent more or less of the immutable principles of righteousness, of which I shall presently speak. According as the

statute law of a nation is based upon the moral convictions of the community, will it be strong in their support; but that community must possess moral convictions to afford a permanent support to government by law; and further, these convictions must have a base that is universal, that is true among mankind everywhere and at all times, that is, or that ought to be, universally recognizable by thought; else their ascendency over human action will decline, and from time to time they will be cast aside with other useless lumber of the past. The decay of the power of certain moral principles and precepts can be abundantly illustrated from history, and will be spoken of in a later page.

123. According to the codes above named, morality may be viewed under two heads: social and individual.

The recognition of, a federal relation among, men is the foundation of the first; the law of human relations in families and communities, the equity of legislation and government, as well as the laws of respect, of honor, and of mercy toward individuals, are grounded upon this perception of universal obligation, which is therefore the most important step in civilization. If men do not allow these obligations, their laws become atrocious and their society relapses into barbarism.

The ultimate principle of social morals is, the

greatest good of the greatest number. The protection of individuals and communities in cases which the statute does not reach, and the advancement of their general welfare is the aim of morality, in other words, general utility.

The second head of morality may be classed under the name of self-respect, supposing self-respect to mean all that it strictly ought; the bringing of life up to a given standard; the fulfilling of ideal manhood.

The quick sense of shame in youth, the sense of personal honor in manhood arise from this source, and virtues of a wide influence belong to it. When partizans forget party issues and refuse the jobs that are thrust upon them, they may be justly influenced by private as well as public considerations.

When a statesman becomes a politician, and limited and individual interests take the place of universal considerations, men feel that his self-respect is impaired. The man who was great five years ago because his words and acts were governed by fixed principles, becomes less than his better self to-day, if these principles are lost behind the passing objects of the hour.

These two principles of morals govern the form of some of the noblest acts in history. The Romans relate that Regulus returned to his enemies, because it was better for Rome to lose one

old man than to allow the Carthaginians to recover ten generals in their prime. And it was worthy of a Roman to die for his country.

I think that these principles may be considered as the general sum of morality. I shall anticipate by saying that they do not contain Christianity. By Christianity a new definition of man is given, as well as of his highest good; and the base of self-respect is changed; all of which will come up in a later chapter.

124. If law be construed so widely as to represent the whole personal government of man, it will include jurisprudence, morality, and also religion. This generic classification is eminently convenient, and their connate character is shown by the fact that in the earliest records of nations, these three spheres were covered by one governing function. The earliest complete code that has been handed down is elaborate in each direction. The Mosaic law embraced worship and morals as well as all that in modern times would be considered the proper sphere of jurisprudence. The preceding Egyptian codes doubtless cover as wide a field. Even at the present time nearly if not all national governments, except our own, employ religion to give them sanction, and at the same time impose upon religion their superintendence, with their support.

Religion, therefore, in its subjective definition,

national, social and individual may be considered to represent the third function of law and government, thus classified:

Religion, Morality, Jurisprudence.

I say subjective, as based upon the forms of human thought, and not upon the essence of the thing signified. In a nation where thought and action are singularly free from statute limitations and tests, these functions are to be recognized in full activity. So that we must observe that their mutual relation and interdependence may vary widely with the age and people where they develop.

125. I shall now give the best definitions of religion that I can find, first of its etymology and secondly of its sphere. "Religion in its very etymology has been held to imply a religatio, that is a reiterated or secondary obligation of morals; a sanction supplementary to that of the conscience."[1]

In Whately's annotations on Bacon's Essays a definition of the Christian religion is given which will answer for the general religious function, although too broad for the degraded manifestations of it, as well as insufficient to represent the doctrine of the Scriptures. Thus: "Our religion, as might no less be expected of one which comes not from man, but God, reveals to us, not the philosophy of the human mind in itself, but that which

[1] De Quincy, "The Caesars."

is properly religion — the relation between the two beings, what God is to us, and what we are to be and to do in regard to him."[1]

Without direct quotation, I may state that one school of the popular mind of the day, and one which claims to represent rational religion, takes the ground that the sphere of religion is chiefly or wholly confined to the heart; that it stands aside from the paths of thought, and reserves its law for the feelings, or at most for the practical life, being felt and acted, but not thought.

Whately's view may be called the practical; this last, the sentimental. Neither the word religion, nor its derivatives are used in the New Testament except on one occasion. St. Paul tells the Athenians when he sees the altar to the unknown God, "Ye are too religious." St. James's description translated as "pure religion" should rather be "pure worship."

Believing that the primal power of Hebrew worship, as well as Christian, lies in the enlightenment of the mind, not only concerning our duties and our feelings, but on the nature and the character of God and the nature and history of man, such views seem incompletely to express the significance of the Scriptures on the subject, if these definitions are taken to represent their doctrine; and the last is really dishonoring if applied either

[1] Whately's Annotations, p. 41.

to Christianity or to the divine statutes of the Jews.

The precept and the symbolism of both Old and New Testaments insist upon the illuminating of the understanding, in such emphatic and various ways that it is useless to point out a fact which blazes on every page. The consummate name of Christ is the Word of God; and that name alone is a volume of promise to thought.

The definition of religion as the worship of Divinity, and the practice of divine commands may be sufficient, if it be kept in mind that the power of its function depends wholly upon the ideal held of Divinity and the standard of divine ordinance in action, language, and thought.

126. Morality and religion are distinct in so far as they arise in different spheres of thought; neither do they necessarily identify their votaries. That they ought to do so is one thing, that they do not is the notorious fact.

127. In like manner jurisprudence ought to represent morality; but it has often embodied and given force to oppression and has allowed scope to crime.

When the errors of men have forced the votaries of religion and morality into opposing ranks, the judgment of after times decides sometimes against one, sometimes against the other.

128. Neither the philosophy nor the stoic mor-

ality of the noble Heathen, Marcus Aurelius, could enable him to discover the obliquity of suppressing a new and disturbing sect that had appeared in various ranks of society, and had diffused itself with alarming rapidity.

To a patriotic Roman emperor, neither its gracious doctrines nor its illuminated vision of the rights, the obligations, the hopes of humanity, not its reverend tenderness for manhood, its tender and august presentation of Divinity, could hinder his philosophic insight of its radical aim, and its dangerous assaults on existing forms of society. The worship of the crucified man, the equal communion of high and low, ignorant and learned, with its precept of contempt for the opinion and manners of the world, of independent and Heaven-sustained thought, were principles which generated explosive elements, not only alarming to heathen ideas and customs, but threatening the dissolution of ancient institutions.

The patriotic motives of Saul of Tarsus in the persecution of this same sect were unquestionable, for it undermined not only the authority of the priesthood, but it broke down what he afterward called the wall of partition between the spiritual privileges of the Jews and other nations. The doctrines of the Christians concerning their slain and risen Master threatened by its new interpretation to supersede the law of Moses and the cus-

toms of the fathers. The transcendent beauty of the gospel, the angelic transfiguration of its lowly disciples (Acts vi. 15), could not bring the devout Jew to tolerate what he thought would abrogate Jehovah's covenant with Abraham. No one now sympathizes with those toil-worn Puritans, who after they had established their beloved theocracy, felt themselves bound to annihilate dissent; and when remonstrated with for practising persecution, replied, "God forbid that we should tolerate error." Men have learned in later times something of the rights of individuals to freedom of thought. In some cases, and in some places, society allows the principle that truth cannot be established by coercion.

But let the judgments which are now passed upon the deeds of former times be tempered by the recollection that there is an order in the development of human knowledge. Let us abstain from the absurdity of measuring the deserts of men who lived in ignorance of them, by the moral and religious standards of to-day.

129. The functions which have been considered may thus be enumerated:

I. That of language, which is universal.

II. Proportion, which is essential to exact science and to all the arts.

III. Law, which is necessary to society and civilization.

IV. Morality, which is the complement of law.

V. Religion, in its limited sense as the sanction of morality.

These great classes will cover the chief labors of thought. They give the permanent results of its action upon its phenomenal and its self-conscious experience. They stand as the result of man's accomplished toil. They remain as the standard to which his unresting mind may bring his experience anew, and they urge him forward with a ceaseless reminder of unattained purpose.

They are both the expression of thought and its measure, its ambassador and judge, its plea and sentence, according as their aspect is toward the future or the past. But of and by themselves they do not embody final truths. They cannot give the expression of that perfection which thought has never found embodied in its own experience, but toward which it is forever building its way across the shifting and uncertain conditions of human consciousness.

130. What then are the first principles of thought? What is the form toward which these types would tend, but which they have never attained?

Is there a form which truth can take in the mind, so pure, so absolute, as to give rest to the unceasing questioner? A truth which rises up through the whole domain of consciousness; and

which, however remote from experience, however faint in our conception, demands a universal consent, and stands above our subject thought, giving us a solemn certainty in place of relative and shifting types, which, whatever their aim, must represent, on one side at least, the wild and uncertain condition of that humanity from whence they are drawn.

131. I will borrow from Jouffroi his description, demurring only at the intuitive character he predicates, and at its asserted universality in the minds of men.

"Intuitive truths, being, as, they are the conditions of all other conceptions of truth, and absolutely indispensable to a comprehension of the external world, it was necessary that they should be originally given" [I should say perceived by thought without its conscious definition], "and that their discovery should not be left to the accidental exercise of our liberty. The knowledge of them has been made independent of the exercise of the will, and of the activity of the understanding. They appear in all men, in the stupid and intelligent alike; they arise without the intervention of the attention or of will; and when once conceived, memory is not burdened with preserving these results, for they reappear whenever needed, with equal spontaneity and ease, so that without effort of our own, and almost without a

consciousness of their presence, we enjoy their influence, as we breathe the vital air, ignorant and unthinking whence and how they came. No one remembers the period at which these truths were first acquired, and philosophers, when they observe them among the elements of our knowledge, can only admit them as necessary. Not at once, however, is their universality observed; for they do not naturally reveal themselves under this aspect. We do not begin with an abstract conception of them, and then proceed to their special application; but, on the contrary, they are always first perceived in some particular instance, and enveloped in a particular judgment; and indeed in the majority of minds they are never distinguished separately, and the universal truth implied in these judgments is never disengaged. To the multitude of men, therefore, these intuitive truths remain always confused, and, as we might say, unknown, though supposed, included, and implied in every act of judgment."

132. Before we can accept the doctrine of these final truths we must make a retrospection which will carry us over debateable ground, and which might easily involve us in the most fundamental contests of human thought. It would seem wise to avoid them in a special subject. But every subject, if the aim be to make it self-supporting, must be carried back to universal truths; and it

is precisely the fundamental truths of thought about which the schools have most differed.

As a plant grows down into the dark in order to grow up into the light, we must begin with the first facts of our consciousness.

Any reader who is familiar with the discussion of these subjects will see that there is nothing new in what is here brought forward, any more than in the material of which the bird builds its nest; the present statement and the nest being alike preparatory to ulterior purpose.

133. Kant allows that, "In respect of time, no knowledge of ours is antecedent to experience, but begins with it."

The facts and the truths of which we are cognizant are those only which are projected upon our consciousness. It is this consciousness which makes experience. We may ask, therefore, if the base and structure of our knowledge does not lie altogether in the sphere of experience, and if there be any need of resorting to the theory of *a priori* ideas for the explanation of any mental phenomena.

The positive knowledge gained from experience may indeed be sifted down to a very small point; the relative and the conditional knowledge of experience is of boundless scope.

I discover no uncontradictable reason for believing that there is another consciousness in the

universe beside my own. I cannot prove that the phenomena, which seem outside of myself, are aught but a variation of this consciousness, resulting from self-contained conditions. But still further testimony is wanting. There is a double experience of consciousness, I am and I was, which gives an immediate and a reflecting consciousness. Thus memory is born, and I am possessed of the idea of time by the experience of change. The present moment is different from the past, because this is known actually, that only reflectively. A thousand changes are of no avail to awaken the mental faculties, unless these changes are dependent on each other in the memory. The total lapse of memory would be equivalent to annihilation for any value that experience could yield without it. Memory is a necessary principle of any efficient consciousness. By linking the present to the past, it endows us with the knowledge of time, which becomes a possession of thought when it receives a name. Without a name, time, although a necessary condition to the most inferior intelligences, is unrepresented, and unseen by thought.

134. Time is a reflection from experience; it is measured first and most arbitrarily by individual experience; afterward the human mind establishes various conventional standards, based on natural facts, night and day, etc.

We can say no more than that time is a condition of our memory. Yet we become demented when we doubt its assurance, or when its order is thoroughly confused. The first condition of consciousness is *now*; the second, present and past, which are gathered into time by memory.

135. The idea of extension is undoubtedly derived from the diffusion of sensibility in our bodies. The first muscular movement reveals the idea of space, which is a subsequent development of the idea of extension; the first arises from the diffusion of feeling, the last results from the perception of motion. Time and space are thus secondary ideas, generated by animal experience of succession and extension. Without them we cannot discover ourself in our experience; but our experience in respect to both may be a trick of memory, and it may be confined to a single point of existence, for aught we can prove to the contrary, time and space disappearing with memory. Such a notion is absurd, but it is not inherently false. Our continuous experience affords us no apodictic certainty; and it is well to realize that our whole mental structure rests on an incomplete base. The problems of consciousness involve our mental sanity; but after all we can say and prove, that lies only in our acceptance of probabilities.

136. Our positive consciousness being thus

reduced to a momentary experience, how shall we proceed with the world of reflections which we find in the memory. We can make one immediate classification, viz.:

I. Recollections of sensible experience.

II. Association of several experiences.

III. Direct conclusions from experience.

It is not necessary to illustrate these. Animal intelligence covers them; phenomenal experience being the basis of the whole.

137. After the primary action of intelligence upon remembered experience, which yields what may be called empirical judgments, the human mind further acts upon these collections, in ways that are beyond the reach of observation.

When we examine our knowledge and enquire as to its sources, we find ourselves in possession of ideas whose origin is as obscure as the incision of those antique gems, the workmanship of which belongs to the category of lost arts.

These remote principles of thought seem to be the least authenticated products of the mind, and of the most doubtful base; appearing and vanishing on the surface of things, like the ideal shapes which nature suggests, but never perfectly attains. Yet these principles are stamped on occasional facts in sharp though broken outlines; we often discover a firm and indisputable character given by them to the political and individual

history of man, although it may again disappear among the opposing influences and the wild confusions of its field. They are thus indicated to be as much the law of humanity, as are mathematical principles the rule of phenomena, although for long so unsuspected, and still so imperfectly noted by human thought.

At times these highest truths rise above all other recognitions of thought. They may be dimly discerned but their principle is indestructible. They may be lost in the individual mind, but they loom up in the history of the race, its supreme and perpetual inheritance.

In a former page a wide classification of mental types was given. A vast amount of subordinate classification would be necessary to form any sufficient system. But this does not come into our plan. It is only necessary that we should be clear, both as to the formation and the character of these types, which, possessing a common origin, have results of the widest diversity, like the leaf type of the plant, which represents, root, stem, petal, stamen, pistil, seed; some self-limited, some reproductive, according to their order.

We cannot altogether avoid controverted points. If we wholly shun the disputes of philosophers, the long accepted definition of abstract ideas may confuse the clear conception of type, which is required by our subject.

138. I shall make an extract from Berkeley's Introduction to his Treatise concerning the Principles of Human Knowledge.

"It is agreed on all hands, that the qualities or modes of things do never really exist each of them apart by itself, and separated from all others, but are mixed, as it were, and blended together, several in the same object. But we are told the mind being able to consider each quality singly, or abstracted from those other qualities with which it is united, does by that means frame to itself abstract ideas. For example, there is perceived by sight an object extended, colored and moved; this mixed or compound idea, the mind resolving into its simple constituent parts, and viewing each by itself, exclusive of the rest, does frame the abstract ideas of extension, color, and motion. Not that it is possible for color or motion to exist without extension; but only that the mind can frame to itself by *abstraction* the idea of color exclusive of extension, and of motion exclusive of both color and extension.

"Again, the mind having observed that in the particular extensions perceived by sense, there is something common and alike in all, and some other things peculiar, as this or that figure or magnitude, which distinguish them one from another; it considers apart or singles out by itself that which is common, making thereof a most

abstract idea of extension, which is neither line, surface, nor solid, nor has any figure or magnitude, but is an idea entirely prescinded from all these. So likewise the mind, by leaving out of the particular colors perceived by sense that which distinguishes them one from another, and retaining that only which is common to all, makes an idea of color in abstract which is neither red nor blue nor white, nor any other determinate color. And in like manner, by considering motion abstractly, not only from the body moved, but likewise from the figure it describes, and all particular directions and velocities, the abstract idea of motion is framed, which equally corresponds to all particular motions whatsoever that may be perceived by sense.

"And as the mind frames to itself abstract ideas of qualities or modes, so does it, by the same precision or mental separation, attain abstract ideas of the more compounded beings, which include several co-existent qualities. For example, the mind having observed that Peter, James, and John resemble each other in certain common agreements of shape and other qualities, leaves out of the complex or compound idea it has of Peter, James, and any other particular man, that which is peculiar to each, retaining only what is common to all; and so makes an abstract idea wherein all the particulars equally partake, ab-

stracting entirely from, and cutting off all those circumstances and differences which might determine it to any particular existence. And after this manner it is said we come by the abstract idea of *man;* or, if you please, humanity or human nature; wherein it is true there is included color, because there is no man but has some color, but then it can be neither white, nor black, nor any particular color, because there is no one particular color wherein all men partake. So likewise there is included stature,.... and so of all the rest.....

"Whether others have this wonderful faculty of *abstracting their ideas* they best can tell; for myself I find, indeed, I have a faculty of imagining, or representing to myself the ideas of those particular things I have perceived, and of variously compounding and dividing them..... I can consider the hand, the eye, the nose, each by itself, abstracted or separated from the rest of the body. But then whatever hand or eye I imagine, it must have some particular shape or color. Likewise the idea of a man that I frame to myself must be either of a white, a black, a tawny, a straight or a crooked, a tall or a low, or a middle-sized man. I cannot by any effort of thought conceive the abstract idea above described. And it is equally impossible for me to form the abstract idea of motion distinct from the body moving."

He continues: "By observing how ideas become general, we may better judge how words are made so. And here it is to be noted, that I do not deny absolutely there are general ideas, but only that there are any *abstract general ideas*; for in the passages above quoted" [from Locke which I have omitted], "wherein there is mention of general ideas, it is always supposed that they are formed by *abstraction*, after the manner set forth. Now if we will annex a meaning to our words, and speak only of what we can conceive, I believe we shall acknowledge, that an idea, which considered in itself is particular, becomes general by being made to represent or stand for all other particular ideas of the same sort."

He then gives Locke's data for the abstract idea of a triangle, 'which must neither be oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but *all and none* of these at once. In effect, it is something imperfect that cannot exist; an idea wherein some parts of several different and inconsistent ideas are put together."

Berkeley replies: "If any man has the faculty of framing in his mind such an idea of a triangle as is here described it is in vain to pretend to dispute him out of it, nor would I go about it. All I desire is that the reader would fully and certainly inform himself whether he has such an idea or not ..... What more easy than for any one to

look into his own thoughts, and there try whether he has, or can attain to have, an idea that shall correspond with the description that is here given of the general idea of a triangle, which is, neither oblique, nor rectangle, equilateral, equicrural, nor scalenon, but all and none of these at once? . . . . .

"It is, I know, a point much insisted on, that all knowledge and demonstration are about universal notions, to which I fully agree; but then it doth not appear to me that those notions are formed by *abstraction* in the manner premised; *universality*, so far as I can comprehend, not consisting in the absolute, positive nature or conception of anything, but in the relation it bears to the particulars signified or represented by it; by virtue whereof it is that things, names, or notions being in their own nature *particular*, are rendered *universal*. Thus when I demonstrate any proposition concerning triangles, it is to be supposed that I have in view the universal idea of a triangle; which ought not to be understood as if I could frame an idea of a triangle which was neither equilateral, nor scalenon, nor equicrural, but only that the particular triangle I consider, whether of this sort or that sort it matters not, doth equally stand for and represent all rectilinear triangles whatsoever, and is in that sense universal."

He says further: "There is no such thing

as one precise and definite signification annexed to any general name, they all signifying indifferently a great number of particular ideas..... To this it will be objected, that every name that has a definition, is thereby restrained to one certain signification. For example, a triangle is defined to be a *plain surface comprehended by three right lines*; by which that name is limited to denote one certain idea, and no other. To which I answer that in the definition it is not said whether the surface be great or small, black or white, nor whether the sides are long or short, equal or unequal, nor with what angles they are inclined to each other; in all which there may be great variety, and consequently there is no one settled idea which limits the signification of the word *triangle*. It is one thing to keep a name constantly to the same definition, and another to make it stand everywhere for the same idea; the one is necessary, the other useless and impracticable."

In the present subject the word "type" will define the thing signified, better than "general name."

139. The only class with which we are now concerned is what I have called representative types, consisting of notions which have a secondary derivation. More than one process of thought must be effected before they appear, and their appearance at any rate is conditional. Certain

characteristics reveal justice to certain minds; a certain fulfilment of relations exhibits it, but it does not appear in concrete form, nor is it recognized by every mind.

The animal intelligence does not discover these types. They stand for what can only be known to thought. They are seen in processes, and revealed in results.

They are doubly remote from observation, first as to their origin; finally, because they can never be directly embodied; as art by an intaglio, or an engine; or law by a given statute; these, on the contrary, have an unapparent existence, except in the derivative processes of thought.

From the uncertainty concerning their origin, the question has arisen, whether they are purely relative, the offspring of the sympathies of humanity; or whether they are intuitive in the mind, its *a priori* possessions; or lastly whether they have a dogmatic origin, based on experience, like the statute law which more or less claims to represent some of them; or finally, if they are recognitions of final relations, which thought attains by its own exercises. The various names they have received indicate the difference of origin attributed to them. That they are recognitions, rather than simple cognitions, is generally allowed. Intuitions, *a priori* ideas, or judgments, archetypes, are words that indicate the opinions of

philosophers concerning them. Plato supposed that we brought them from a previous state of existence. Kant supposed that although we were first awakened to intuitive ideas by experience, that they were nevertheless inherent possessions of the mind.

So archetypal is their presentation that it is not wonderful their appearance should be mistaken for reminiscence; for memories brought down from a time when the mind dwelt among immutable and perfect forms.

140. In the Phaedo it is argued that our perception of the beautiful, the good, the just, the holy, "in one word, everything which we mark with the seal of existence," appears to be remembered, because compared to a standard which exists only in the soul. Being the permanent and unique possession of the soul, Socrates concludes that it must have belonged to it before our birth into this world. A multitude of philosophers and poets have followed in the wake of Plato, either launching boldly into his exploration or veering unconsciously toward the same line of thought. Especially when youth would sail in search of the golden apples of the Hesperides, does this current sway the keel of his vessel; and reminiscence seems the medium in which the fairest truths are revealed, that harmony of which the rhythm is everlasting, an awakening of the

soul, and no first beginning of its deeper perception. Like a mirage from the land lying around us, unseen in the common line of vision, but discerned when projected into another medium, our real life appears extending beyond the phenomenal, the soul's insight beyond its experience. Ideas absolute and immutable not belonging to its present horizon, seem to represent what it lost at birth; in the confusion of time it mistakes what is above and around it for the past.

So much concerning our nature is indicated by our entertaining them. They are perpetual things; and the fact that we domicile them, act by them, live for them, and, if need be, die to maintain their authority, may show that there is a problem in our brief lives of gigantic, of unknown proportion, that the nature of man comprises a function for eternal existence.

It might further be conceived that by a fulfilment of being, which relates us to all the future, we also become partakers in all the past, not by vision only, but by entrance into universal relations. But this is speculation.

141. So objective are these standards that they may be classed in what Spinoza calls forms of eternal essence, though they can only be presented to the mind by names.

Yet they form that base to the whole experience of the mind, which is its only ground of reality,

the only permanent possession, whereon to found her structures, and fulfil those functions in security, without which her existence is vacant and fruitless.

Thus the question of their origin is fundamental, touching the constitution of the mind and the character of its whole product.

142. Berkeley has said that "some men think, but all men have opinions." It is not necessary to our salvation, either in the practical affairs of life, or in order to possess an honest and good heart, that our opinions should have a philosophical basis; but thought is the noblest function of humanity; and as the facts of thought ultimately give form to society, it is to be desired that when we do think we should think justly.

143. Therefore if we intend to enquire for the reason of our opinions and beliefs, sound doctrine on this subject is of the first importance.

Although the investigations of philosophers have brought them to no final agreement on this point, no man has a right to accuse even a child of presumption, for attempting the solution of the problem. We may shape our own process, calling no man master, and dare to believe that we lay hold of fundamental truths; of truths as wide as humanity, as ancient as thought; yet as entirely of our own discovery as if we were the first individuals of the race who held them; truths which

nevertheless unify us with saints and sages in the past.

144. Before we enquire further we must seek a general classification. Is there a type which can generalize the whole? I think that our conception of order can be made universal to phenomena and thought, thus classifying both.

Order:

In universal mind, the type of wisdom.

In phenomena, the type of proportion.

In humanity, the type of law.

The conception of order is deteriorated by ignorance and folly; it is developed by knowledge and wisdom. The antithesis, disorder, is as definite and recognizable as its opposite; but order represents to us only what is right and best in every form and relation.

Therefore mere knowledge is not the noblest quest of humanity, but wisdom. We seek not merely to know what is, but also what is best. This distinction aims at the root of a great deal of philosophy; it would make philosophy not universal, but elective.

Every apprehension of just proportion, every recognition of due relation, generates another of the forms of order, and thence of wisdom, in the mind. By the knowledge and observance of relations, men obtain all their power to discover science, wisdom, beauty.

145. Before we can appreciate relations, we must possess conceptions, by which relations can be measured.. Before we can make predicates, we must possess types.

We here reach the fundamental ground of dispute. Have we *a priori* ideas of a straight line and of a circle, or do we conceive them from the sea-line, the sun and moon, and other natural forms, afterward investigating their properties and reducing their definition to the most general terms? Have we intuitions of the facts of number, or do we gather the types of number from experience, and by their possession become able to make further discoveries? How could we have counted two without the impressions of the senses in the first place? Even the deaf mute confesses that he first learned numbers by his fingers. We find indeed these empty types in the mind, representing no experience, merely relations; yet were they not derived from the experience of phenomena? Can any mathematical figure, any mathematical relation be conceived without conditions which are realized from our animal life, although in mathematics things are assumed which are impossible to experience? Are not the most universal, the most necessary ideas, drawn from the experience of the senses; extension, space, time, being deduced from the natural experience of our consciousness?

The *a priori* predicate belongs to the process; the idea, whatever it be, is a result; it may be the first result of thought, but is by no means the first one of consciousness; a long stretch of animal life intervening before the action of reason begins.

The process lies between animal experience and thought, neither before, nor even simultaneously with, the dawn of consciousness.

146. In the division of science into the spheres of nature and of humanity, although this can only be done for a limited purpose, we find that natural science has this immeasurable advantage. The mediation between nature and thought is defined in terms based upon the imperfect experience of the senses, and thence conceived by the mind with its own absolute precision, so that the name of exact science expresses it.

"As long as we have definite forms between ourselves and chaos, we may build on science like the arch of a bridge that rests on the firm piles fixed in the rushing waters."[1]

So great is the purchase thus acquired that science extends its scope beyond positive ground into that which is purely theoretic. In its theorems the bound of possible realization is passed, and forms are brought out of the great deep of human thought which must always remain mental; relations and conditions are established which can

[1] Müller's Second Series of Lectures on Language. Lecture ii.

never appear in phenomena, and this by a demonstration which is complete and final.

Nature is thus the crystal cup of thought, but for all that, thought is greater than nature.

In the science of humanity the standards are developed from the experiences of human life in the first place; thought, drawing her primary types from nature, goes on to make these types stand, not only for general classes in nature, but to represent predicates, and to symbolize principles which are discovered only in the relations of humanity. She cannot form her final types of the relations of conscious and self-reflecting existence except from her own life in relation to such; but she takes the representative forms of final truths from types she has already gathered for the generalization of natural knowledge, so that, like the silkworm, she is compelled to weave her house from her own entrails; or, like the bee, she secretes wax from her pabulum and then builds from it the cells which will secure her further harvest.

147. I will give an illustration. Justice is represented by a word of which the first meaning was based on tangible facts. It holds its full significance from reflections of human life and character rectified by the processes of thought; but still its name remains a verbal symbol, drawn from nature to express a purely mental idea.

Thus; Of representative types one class are projected in dimensions realized from time and space; the other is projected in dimensions realized from further conditions of humanity. Both classes have an existence which is independent of the experience and the processes of the individual mind, and which therefore represent absolute truth; and finally both classes generate, in the human mind, the medium which reflects them. I mean that a man becomes intelligent in the directions in which he recognizes the relations of things to types and of types to each other, whether of forms, or processes, or principles. A man learns unavoidably to distinguish a straight line. He may or may not learn that the three angles of a triangle are equal to two right angles. If he learn it, he becomes so far more intelligent. If he know that in A.D. 1492 Columbus discovered America, he will have increased in learning, but not necessarily in intelligence.

Hence, the type of just dealing, or justice, is or may be developed by the mind out of its early experiences, but in an immature form. All along its history the conception may be more or less perfected, but as it grows, it creates the just mind that reflects it.

All that is here stated, rests on the ground that thought is, by its constitution, a compound act. I take it that the action of intuition must be

simple. Hence I cannot recognize intuitions in what appear to me to be results of reasoning processes.

148. I have tried to establish the following conclusions.

We can predicate nothing of a consciousness of which we remember nothing. Therefore the argument for antenatal ideas is too vague to be adopted seriously.

Nor is the argument for intuition incontrovertible. We do not see that any ideas, or any truths whatever, exist independent of experience, or of mental elaboration, one or the other, though the position that some ideas hold, is that of many removes from experience.

When some of the highest principles of order are thrown into the shape of morals, they may be supported by the sympathies, in many cases, but these principles no more depend upon human thought or feeling than do the relations of the hypothenuse.

The subject of origin has been carried far enough at present, but it will reappear later, or at least, partially. Further definitions are now required.

Every perception of the reason, every generalization, every classification, every truth that thought announces, if of real and permanent value, is another definition of order. The mind

recognizes order, defines it, appropriates it, refers its own process and product to it, but does not create it. The individual perception may be clear, or obscure, or quite wanting, but it is the endowment which gives originality both to thought and character; and power to production, because the form of all development is thus immediately derived from primal sources.

149. Leaving the subject of natural order, we will now confine ourselves to the order of humanity; to that which is self-conscious, reflective, generative. As in natural beauty proportion is perceived without being understood, so in thought the final form of these highest truths is unapparent. Nor can they be justly represented by appearances. They lie behind our natural experience, and in all our experience of them there is something lost. Our recognitions of them are but special development of that which is really universal. When we embody them, we subject to circumstances that which is immutable of itself. From their universal character they elude those who cannot make generalizations in accordance with them. The Greek saw beauty. The just man discerns justice. The good comprehend goodness.

This gift of discernment is an independent function. It may belong to the young and the uninstructed; it may be wanting to the much

experienced and the learned. Jouffroi has well noted that these truths are independent of the conscious action of thought. They stand about the mind; they guard its feeblest steps; they have ward over its loftiest ascent, without its direct appeal, or perhaps its consciousness of their mediating power.

The principles of order are absolute and permanent; they are universal and homologous; they are prophetic, and they make men free.

Under a thousand diverse forms they combine in one vast unity. We cannot always relate them, but they cannot contradict each other.

Let us examine in detail these statements, so that we may judge if they apply to the character developed in a subject so complex, so at variance in itself as humanity.

150. These principles are so far universal that they are the foundation of the laws of safety and preservation for the race, but they are elective in their power over mankind. The failures of men to realize the conditions which should be the results of their life and action are like the failures of nature to produce normal effects, of flowers to produce fruits, of organizations to exist in health. Men fail in attaining a true completion of their lives, even as nature fails in producing or preserving her types.

The principles of proportion in science, and of

order in human life, represent relations of different character. It is necessary that humanity should be related not only to what is absolute, but also to what is limitless and universal, so that it may be prepared for its work. If we confine our labor to what we can fully conceive, our discoveries will be insufficient for human occasion. We must remember that what we cannot closely define is not necessarily vague because it appears so to the human mind. It may have a definition more complete than we can give to our most tangible experiences.

In the next chapter we shall seek that fundamental thought whereon all these problems are based. We can at least learn to know what we should seek.

We will now characterize these principles as they appear in human life.

151. They are absolute.

Every action of man is altered by the light which they diffuse, or by the shadows cast by their illumination. So soon as he rises out of animal life he stands in the presence of immutable truths and walks by everlasting laws. All his relations are revised by them.

The practice of religion is the establishment of order.

The scope of philosophy is the search after order.

By their recognitions of order, the works of the imagination are made of value to man.

When by the toilsome steps of thought, it may be in its action upon the hard experience of life, the mind attains the sure ground of fundamental truth, it is suffused with joy. However severe the bearings, how awful soever the aspect of such truth, there is rest in its reality. Thought thus accomplishes its function. Without this highest exercise its action is partial; without the vision of these truths it is incomplete. That they may lie in abeyance, that at times they seem lost, does not prove that they are not our due possession.

The sufferings of individuals, and the throes of nations, have arisen from efforts to realize more fully, in the broken and disjointed condition of human life, these great unities of thought. Not only do individual men make the endeavor for uprightness, but a whole people may seek to resolve into law, ideas of justice and goodness. Even nations may rise up and with awful sacrifices, with strong and amazing patience, may uphold these same ideas as they are further embodied in the consistency of power, the obligations of freedom, the redemption of the oppressed. We must not overlook the failures of humanity. Neither must we forget its capacity for ideas of perfection, and its strain after them, its unceasing longing, though expressed but in wild and wandering search for ultimate order throughout

its existence. Its impotent efforts, the agonies of its failures, are all a testimony to the living function which ceases only in final ruin. Despair alone destroys it, and despair is the mortal sin of humanity. An ideal that is sublime lies beneath the stormy horizon of human life; an unapparent type underlies every relation and every duty of man.

152. They are permanent.

There is no true analogy between organic growth and the developments of the human reason. The first produces its type improved or impaired by circumstances, with a character determined by individual origin. The reason emerges in the vision of truth as the light grows at the dawn. The light is always the same. The difference is in the subject which manifests or obscures it. The spirit of man is under conditions, but it is not an organism. It lies dark, or it borrows light from primal sources and reflects that which has no growth.

Notwithstanding the immeasurable power of ideas of order, when once established, it is often difficult for the mind to receive them, and to form justly the intermediate conceptions by which they are related to present facts. An effort of the conscience may be required to uphold them, not only in the life and movement, but even in the thought and science of the world.

153. They do not lie in appearances, and cannot be limited by what actually exists. Moreover they are constantly receding from accomplished work, so to speak. When the mind has made its first collections of facts, it forms its estimates and it generalizes, sometimes wisely, but never completely. When it has reached a judgment, or a classification, that is used to assert a principle or to establish a system, which, however, may prove to be imperfectly based, but new facts are referred to it, and new conceptions are judged by it. So that while thought is bound by its constitution to advance, there is that in its method which tends to build barriers against further progress. The reluctance with which men relinquish systems that are superseded, the fury of their struggle when rents are made in their settled arguments, is like the distress which lizards experience in changing their skins, except that the animal is sure to persevere through the whole process, and aid by his efforts the painful steps to growth.

These truths have to contend not only with sanctioned error, but the individual, political, and social interests of men become bound up to resist them; the force of custom, the conventions of the world, established interests, vested rights, and ancient wrongs, so that their votaries have constantly to fight against the worship of visible things — of idols. As meaning sometimes dies out

of words, so may truth fade away from representative forms. And then the dreaded question arises of the expediency of change.

154. Men have spoken of the living truth. In some respects the expression is just. It is an active force wherever it exists; hence it is bound to determine its own form, to withstand other forces, to shatter obstacles, to put circumstance under compulsion, or else to withdraw and leave the mockery of its empty and impotent forms behind.

Therefore is it permanent, for it does not die with the things that represent it among men.

155. They are homologous.

They have an essential unity in varying manifestations, even those which appear contrary to one another. They take a thousand forms when they become conceptions, and in every form they lose something of their original brightness and power; yet they are the same, yesterday, to-day and forever.

They cannot be entirely defined, nor can the full conception of them be made by the understanding, whose product is always in some way conditioned by experience, while these are absolute. But a perpetual translation of them is carried on by everything which exists; and they are the true result toward which thought tends as surely as organization tends to develop regular types.

We may see their variation of manifestation in the filial duty which is recognized as belonging to the true order of human life, by all except degraded races and individuals. The duty never ceases, but, in the course of years, the function may be reversed. It begins with obedience, it may end with protection and even control. The first relation of the parent to the child is shown by giving support and exercising restraint; the last may result in receiving the same.

No action is always right, even such as to give food to the hungry or clothing to the destitute. All such duties require to be related to just laws, and to embody judgments, or else they have no wholesome character in themselves. The chief source of the practical difficulties which wise and leading men encounter in their labors lies in the crude and ill-considered action of those whose conceptions of duty are perfunctory, who are satisfied with doing something that appears well, without the effort of thinking and judging. Crude ideas are dangerous; but crude actions, actions which are not informed by thought, are the most to be feared; most easily do such actions form habits to which men are pertinacious in adhering, in proportion to their own want of that freedom which thought bestows.

156. They are a unity.

This is implied by the characteristic of univer-

sality. We are now seeking their subjective forms in the mind, and their historic forms in life, still reserving the enquiry for the ultimate position of these truths in the final quest of thought. I must therefore be pardoned for the hiatus now to be left in the argument, and for taking it for granted that there is final truth contained in subjective conceptions; and definite reality in these relations, which now I can only loosely describe, but which being the dominant truths of all that we call civilization, and of all that may be signified or prophesied by that glorious word, must be treated among the products of human thought, must be recognized in their subjective form, before we can address ourselves to the contemplation of their true base. Prophets and philosophers, apostles and teachers of morals, have perpetually presented these principles to men as concrete verities. I follow their method when I speak of these attainments of thought as definite and immutable realities, though in so doing they are separated in the mind, from their eternal foundation.

157. It has been well said that nothing can be thoroughly comprehended without comparison. Therefore we must at times resort to this method.

The human mind shows a tendency to generate sentiments which resemble the principles of virtue, but which, having no immutable base, are pretenders and usurpers when placed in full sway over the human heart.

Sometimes it is assumed that the excess of a virtue will produce a vice, but this I deny. There is no excess in what is absolute; that must be self-poised and final. But there are self-limited forms which simulate permanent principles, and hence are false when permitted to control the wills of men.

Philosophers have asserted that all errors are partial truths. This is true in one sense, but no form of truth in itself did ever present error. The distortion lies with us; a mirror returns half an image; the thing reflected is complete; the defect is in the mirror. But this is not all; there are chimeras, sometimes of our own personality, which may rise to gigantic shape, and take a heroic or supernal aspect which the mind proportions from its own teeming passions, but which can never present the august lineaments of everlasting truth.

158. The primal principle of order being power, the human mind incessantly enquires for its ultimate form. If we compare the notion of power with our idea of life, we find that life is realized only by phenomenal facts, and therefore has no absolute character. Life is characterized by motion. But power does not depend upon its exercise. Potential energy stands beyond every exercise we can conceive; it underlies all things, even negations. Life has no existence, except

as development; but power is antecedent to development.

The idea of life arises in phenomena; the conception of power is secondary and remote, and a little reflection will convince us that the just conception of it, pure and unlimited, is now, and always has been, the most difficult act of the human mind, and for that reason men have always been prone to worship false gods.

159. The full definition of power involves unity and universality, otherwise it is conceived in a limited and imperfect manner, and its function is without that efficiency and beneficence which belongs to ideas of order in their fulness.

The history of humanity throws back a remarkable reflection from the influence of this fact, shattered indeed, but dazzling as that of sunshine when it falls upon a troubled sea.

The old conception of universal empire, with which some of the conquerors of nations and founders of dynasties were inspired, may have sprung from the idea of the possible unity of mankind under one headship, and the consequent development of the federated life of humanity, peaceful, unimpeded, glorious, such as the world has never seen. Idealists have doubtless been misunderstood at times, and falsely accused of wronging liberty, because this sublime idea of dominion has appeared before them as the key to

the greatest perplexities in the political condition of mankind.

The restlessness of European nations, the perpetual seeking for new combinations and altered boundaries, would seem to show that the idea of the balance of power, and of the territorial sovereignty of certain families, is either false or insufficient for their welfare. Some nobler conception, some idea founded on a wider principle, is wanting beside those which now draw men into political action, and govern the currents of national life.

160. The consecrating element, which enters into the efficient conception of human government shows that it is related to ideas that are immutable, and hence that it involves obligations which are universal. Men have always in some way bound up with every form of government, to which they allowed any permanence, a divine sanction, which is expressed by the divine descent of the sovereign, or the divine right of kings, or in popular governments by the "Vox populi, vox Dei." Whatever the apparent base, there is an implication which makes our duty toward it religious. The law of public life is bound again (religato), is restated, as it were, by the law of individual life.

This development has been the instrument of endless mischief in the hands of usurpers and

oppressors, and has been the base of the atrocious claims of tyrants. Nevertheless, it has its just position in thought, and is the foundation of the great duty of loyalty, that duty which is misconceived when described as respect due to a person, rather than respect due to a representative power.[1] The reason that wise men do not break loose from their laws when the executive or the monarch is a fool or a knave is because he is also their magistrate, and, as such, he is the head of civil order.

This is not the place to discuss the exceptional conditions of lawless tyrannies, or of conquered nations under the oppressions of their enemies. Practical difficulties are often found in the application of general principles to human life; but it is necessary for men to live by them, if they would live wisely and well. The noblest sentiments and the most disinterested affections will instigate men even to crime, if these affections and sentiments be not pervaded, shaped, controlled, it may be at times crushed, by the domi-

[1] Thus misconceived by Hallam: "From these feelings, engendered by the feudal relation, has sprung up the peculiar sentiment of personal reverence and attachment to a sovereign which we denominate loyalty, alike distinguishable from the stupid devotion of Eastern slaves, and from the abstract respect with which free citizens regard their chief magistrate."—History of the Middle Ages, close of chap. ii.

One might suppose that the evident derivation of the word would prevent it from being misunderstood.

nation of immutable truth and of duty that is universal. Sometimes human affections seem to be bound up in their greatest tenderness and intensity by their very limitations; but, unless there is a law behind and above these partial affections, they will be insufficient for the safety of the individual or of society.

161. The plea of patriotism as the ultimate duty of man has plunged men and communities into desperate courses, and has thrown a false veil over sacrilegious acts to the eyes of the multitude.

The priests and rulers of the Jewish people exasperated the national jealousy to madness against the Messiah, who preached the freedom of a world-wide gospel, and who halted not in denouncing the wickedness in high places of the chosen nation, until in a desperate hour they forced his crucifixion from the Roman governor. We have seen this argument of patriotic self-defence well stated by a modern Jew.

This sentiment may be contrasted with the duty of loyalty. One is conditioned; the other is universal. The first is limited by geographical position, or by race; the latter is always due to the government under which we live.

The strength of the American Rebellion lay not so much in the intelligence or the unscrupulousness of its leaders, or in the devotion of their

followers, as in the doctrine of state sovereignty, and the false conception of patriotism which was made to supersede the duty of the citizen to the government of the United States.

162. The government which gathers us under its shadowing wings recognizes our equal rights, and would bestow upon us its equal benediction. The stranger knows not if the citizen who is protected by the stars and stripes be of the North or South or East or West.

Near a century ago the current of national life began. The bloodshed of the war through which it had birth, its energy of development and action, the comparative homogeneity of the people, not physical, but mental, have formed a nation with a concentration of power immense in proportion to its numbers.

The citizenship which loyal men acknowledge is neither constituted by the limits of territory nor based on the distinctions of race. We are the same nation that was once confined by the limits of the thirteen States. The same symbolic flag has since swept to the shores of the Pacific and downward to the borders of Mexico. The territory added to its beneficent domain has been purchased at an honest price, even when golden millions were to be paid to a conquered and an abject enemy.

If, in the course of years, the ground on which

the forefathers fought the war of independence, the territory east of the Mississippi, were to be held by foreign arms, would not the nation survive, so long as her citizens were loyal, so long as her institutions retained their hold upon their life and action, so long as the traditions of the past and the hope of the future consecrated her destiny?

Since the birth of the nation, thousands and millions of people have been incorporated into her life. The original stock has multiplied on the bounteous soil, in the decent homes, under free government and beneficent laws. The sweat of the laborer has dropped on the birthright of his children. Hordes of emigrants have been absorbed and organized by the general life. And what is the result? Is not the national bond stronger to-day than it was ninety years ago? The body politic has suffered and struggled; it has been wasted by the terrible sore that was born with it; but it is the same nation as that which emerged from the struggle that was guided by Washington and his associates — the same nation that rose up to suffer under Abraham Lincoln — the same, as the man is the same as the child — the same *one*, but unspeakably more.

Whatever the boundaries of individual governments, there is a further community of nations to be prayed for, and a dominion of law which shall

cover the whole of our ravaged and wasted earth, so that civilization shall no more be localized, but universal; a mighty government will not only be humane in Europe, but in Chinese seas and the Western Islands; a great nation will be beneficient, not only where the school-house plants liberty in the ground, and the church-bell consecrates the morning air, but as well where the helpless red man fades away from his father's country, no longer his inheritance. Order is prophetic, and its dominion is ultimate. Those who have sought it, but have not found it on earth, have not suffered in vain, but those only who through their suffering have never seen its pure and enduring light.

163. These illustrations of the central conception of power have been taken from the fragmentary expression of the life of humanity, but in human thought it rises, orb-like, into perfect form, and its poles are love and justice. From love springs the primal movement of all things. Its act is bounty, its reflection joy. It determined the beginning; otherwise how do things exist? why does not empty, silent night reign forever?

Human affection cannot rise to the universal form of love; for such love is antecedent; we say that it purposes, that it predestinates its object, but human thought is incompetent for its apprehension, an imperfect symbolism is all that it accomplishes.

Justice is the correlative of love, its proportion and consummation. There can be no contradiction between them. Love cannot be perfected without justice, or justice without love. I repeat, they are the poles of our orb. In our atmosphere of clouds, in our shifting year, their aspect changes, but they shine forever with the same light.

Such statements are vague and transcendental, because these things cannot be defined or described, except in language, of which the figures are remote from their origin. Moreover the human reason recognizes in these principles, laws which are sustained by reason alone, laws which extend beyond the limits of experience, and are therefore without the terms it might afford. Their scope is beyond that of positive morality, however it may at times represent them; and they are without those human sanctions from which, in spite of their deficiencies, morality finds support in our actual life.

So that it becomes an act of faith to believe in the power, and hence in the love and justice, which underlies all things, but whose dominion cannot be as yet satisfactorily demonstrated to our understandings. Therefore we may say,

164. The principles of order are prophetic. In the field of phenomena the establishment of a general law not only clears the ground where its application is first demonstrated, but a radiance

from it may be cast over distant fields of research. The present scientific processes will doubtless carry order into fields now unexplored.

. It has come to pass, at times, that students have announced general principles, without discerning the whole of their significance, and it has been reserved for later comers to display their bearings in directions where the discoverer did not look for them.

165. The influence of original deductions, and fresh views of the order of nature, upon the habits and processes of thought are to the full as remarkable as the research and accumulation of facts of the present time. The methods of the mind have thus been modified, and its means of conception enlarged and varied.

The modern science of geology has not only established itself as a branch of knowledge, but has influenced many and distant paths of thought. The conception of vast and silent changes, which take place as results of previous conditions, the reference of wild and confused forms and seeming arbitrary effects, to forces that can be proximately estimated, and that are always working with unnoticed power, has led to new conceptions of the extent and uniformity of general causes.

The adaptations between organic forms and the varying circumstances of the time and place of their appearance — all variations progressing with

a certain harmony — has stimulated thought to its highest pitch to discover the principle behind this conformity. Whatever may be the result of the application of the doctrine of natural selection to the origin of species, it furnishes a fresh mode of conception on other subjects. Müller says that Mr. Darwin has thus afforded "a new engine of thought, a new genus of thought, a new category."

166. In human life the principles of order have a yet profounder announcement, because they bear down upon the thought and hope, upon the self-conscious energy, which contain in themselves their fulfilment. These principles impart their own justification to the man who acknowledges them; and he who proclaims them is endued with a might beyond himself.

There are ideas of order, proclaimed by reformers, urged by fanatics, it may be upheld by tyrants, whoever has adhered to them, in the stress of life, has derived from them a power which did not belong to his own character.

Let a new view of justice be announced to an oppressed people; the man who asserts it will be supported by a loyalty which is independent of his own worth.

Not all the horrors of the Reign of Terror could blind men to the great truths brought forward during the French Revolution, and to the infamy

of the falsehoods which were overthrown by it. It is difficult now, to realize the power of Napoleon's announcement: "La Carrière est ouverte aux talens," to a people so hampered and so energetic as the French.

167. The turmoils, the struggles, the uprisings of nations, are based upon these ideas of rights. Tyrants and reprobates have held their power through some recognition of universal manhood, of justice toward the helpless and the poor. Caesar Borgia and Louis XI. chiefly exercised their cruelties on their friends and companions, while the miserable poor were often protected by them. The temperate and religious Charles of Burgundy worked out his own astounding ruin through years spent in wasting the hamlets, and desolating the homes of wretched peasants.

Let a just respect to manhood be wanting and no private virtues will make amends in the page of history.

No gifts of personal character, no aspect of romantic feeling, no borrowed sentiment of chivalry can avail the man or the cause that stands up against human obligations. However long the time may be, however faithless and perverse the generations may become, the order of nature is not more inevitable than the doom of the impious conventions of men.

168. An instinctive belief continually uprises in

the currents of thought, that there is a perfect order which belongs to humanity — not merely the innocence of youth, or the simplicity of the golden age, but its restoration, and the consummation of its manhood. The ideals of philosophers, the dreams of poets, and more than all, the prophecies of the Hebrew people, have held it before the human mind, until it has become a fixed and radiant point of contemplation. Notwithstanding the pressure of present evils, and the threatening aspects of the future, or the failure of past hopes, all forms of philosophy, even systems with purely natural definitions, are lighted with gleams from a resplendent future.

If humanity be capable of such result, the belief that the evident disorders, confusions, irregularities of its history are not purposeless, are not without a deeper than the apparent significance, necessarily follows. We are assured that the whole of its movement is measured, that it is related to a fixed standard, that somewhere will appear the adjustment of the errors and confusions that are seen in the present time; that its ultimate purport is beyond the waste and incompletion which it now exhibits.

169. In the individual life the perception of a nobler meaning than the apparent one is indicated by a remarkable characteristic of the mind. The present time is attached to the past by the golden

chord of memory, and we may be lifted by it, above the worry and fret of the hour, to those tranquil realms of thought, where minor evils are disarmed of their power to hurt, and to sorrow's own self, far above its immediate world, those griefs which seem deep and wide as the whole of life, even they stand around the soul, sealed in their calm existence by the majesty of the immutable past. We are powerless in their presence; our voices sink down to their own silence. We can offer them no reparation. Our love wastes itself like a lamp in a deserted chamber.

But as they are withdrawn from our natural eyes, they become transfigured to our vision. They are always solemn. They may be awful. But they wear their crown of deathless beauty. By all the misery that rouses man to feel, to think, to weep; by all the power and strength of passion that roots his soul into deeper and nobler life, let him not forget. The Pagan believed that the draft of Lethe was the preliminary of Elysium. But they who have learned the divine worship through sorrow, perceive in its shadow the soft dawn of a new light and the energies of a fresh and tender life, which changes and glorifies, but does not destroy this first principle of our consciousness.

The associate power of the memory which slowly eradicates its stings, which fills up, clothes, trans-

mutes, consecrates its possessions, is one of the most remarkable things in our whole being. We rise above our own experience, and view it in a different perspective, so that its lines are drawn into new combinations, which imply a calm and noble purpose, governing its apparent confusion and distress. The great waves have not broken the appointment of the tides.

But by more than general laws was its movement timed. The whole continuous story has points of light which brighten in the coming day. In its own blind but tender way, the soul gropes among what it has gathered, even among things that had wounded it, and so notes its marvellous fragments, that behold they are parts of a building not made with hands — behold, even the outlines of human history are proportioned; and each of our lives contains a fairer purpose than belongs to nature's fairest growth. We are yet too near to see it. The shadows are too deep. The flowing lines are interrupted. But the human soul can look upon the past from a higher atmosphere; and then it perceives the purpose and beautiful intent of all things. It seeks for things, which by its experience it cannot know, its aim is beyond its natural reach; and there is a power by which it becomes prophetic. There was, there is, there shall be, a central life which explains all mystery and resolves all wrong. Therefore it has been

well said that man feels that there is something within him that is greater than himself.

170. The principles of order make men free — in their individual, social, and political life — in thought as well as in action.

Freedom is the highest condition of life in every phase of development. As the animal acquires powers of locomotion, its means of enjoyment are increased; as the individual power of selection is enlarged, the conscious existence is enobled; the whole status of things is developed in dignity and happiness by variety of action. But let it be remembered that freedom is relative. No supposable condition is without its appropriate laws. I am convinced that the blind way in which the name of freedom has been dragged about among men, has hindered the progress and veiled the beauty of its majestic presence. It becomes us to learn its statute before we assert its power and vaunt its charm.

171. As human consciousness is the highest and fullest subject of which freedom can be predicated, we should, if possible, define our consciousness before going farther; but this cannot be done satisfactorily, because it is not possible for the mind, which is completely isolated in its actual experience, having only reflections in common with the rest of the world, to compare its consciousness with anything else. But it may classify its conditions and its convictions.

172. Consciousness is either passive or active. In passive consciousness the mind lies inert beneath the impressions received through the senses, or through the imperative ideas which by association return upon it. An absorbing grief is vainly driven back; every circumstance recalls it, as well by the absence as by the presence of all that accompanied that which we have lost. Passion finds means to force itself upon the attention by every avenue.

This passive consciousness rests upon a substratum of unconscious life whose movement was organized beyond the present reach of memory. The hand now writes unnoticed by the thinking faculty, but its function was developed by slow and painful training in works of skill during the forgotten years of childhood. A system of nervous action has been organized which remains to serve us long after the action of the will that first constituted it has ceased to bear upon it; and the very fact that we ever so willed has lapsed from the memory. The marvellous action of intelligence is perhaps most marvellous in its organization of the unconscious system not only of habits, but of habitual purposes, so coherent in its character as to be wholly independent even of our recognition.

173. This underlying field of life constitutes that base of spontaneous impulse, of instinct, of

innate or *a priori* ideas, as it has been called, according to its sphere.

The system of action developed in the nervous centres is of such perfection that the player upon an instrument gives his whole thought to the combination of sound, while his muscles, obeying the command of the supreme volitional centre, perform their functions with complex action and adaptation, which the mind has no present consciousness of planning and of which indeed it receives no further report from the automata which serve it.

It is thus in every direction. In our continuous experience impressions have been stored, and cultures have been treasured by a registry of which we are as ignorant as the infant heir of the title-deeds by which his possessions are assured. But the present action of our consciousness is based upon the results of past experiences, and these form systems in the memory of plans and of actions, which are wholly unrecognized by our thoughts, and which our attention is incapable of following in all their complexity. Without our volition they form the basis of both animal and mental life.

This is alluded to here because the conscious life, which seems to us so new, so fresh, so intense, includes the will, which appears to spring free from the virgin soil of our individual existence

and the living pulse of the hour; this life is really building on caverned foundations, on silent chambers, and hollow corridors, pierced and shaped by the forgotten action of human purposes. To-day men speak of the spontanaous life in contrast to the volitional life of the human constitution, but we must observe that its character of spontaneity lies only in the veil which is dropped before it by our ignorance.

174. We therefore class the present action of consciousness, what we call our daily life, in three fields.

First, the so-called spontaneous life which is included in nature; the wants, the wishes, the enjoyments, the likes and dislikes, all that has been named instinct, which we share with the brutes, and of which, like them, we inherit, the varying and specific character from our family, our race and our species. We are not only men, but we are men of a certain type of countenance, complexion, and constitution.

175. In this primary life is comprised the apparent beginning and close, as well as the natural base of human existence, but it is not that which effectually characterizes either the individual or the race.

When the primary consciousness includes the chief action of a man, when he stifles the life of thought, he may be almost without convictions,

or even settled opinions. But as he must be more than an animal in spite of himself, the ground they should have covered is void and desolate.

There is nothing told of human misery that surpasses the interior life of such men. Nor is there any way by which our existence can be so effectually emptied of interest and hope than thus to limit its sphere. No companionship is so dreary as that of human beings so limited. The confessions of such persons have been published to the world sufficiently often to certify this statement.

176. It is the function of humanity alone to form that store of convictions which results in what may be called the secondary consciousness. We conceive from them a standard of our own calling as individuals, as children of a family, as citizens, as men or women in domestic and social relations, as votaries of commerce, art, science, in our profession and in our confession; in short, a standard which is the law of that class of humanity to which we belong. This generates both a sense of duty and a sense of self-respect, for there is no base to human character without self-respect.

Much that is the result of our temporal and local experience is thus held as axiomatic and final truth. The consciousness of an Englishman, a Frenchman, or an Arab, represents very different aspects of what should be the common law of humanity. Hence the ground of most prejudices

lies within this sphere, and it is consequently difficult to bring it into the higher freedom, because men often feel that the invasion of universal principles will be destructive of what is dearest to their hearts.

177. Those principles which appear as light and wisdom in the human mind may be classed as its ultimate convictions. They possess men in the most various degrees, and inhere in the individual life in varying degrees at varying times. Of their first appearance it rarely retains any history. There are hours when they illuminate all the possessions of thought and give new aspect to the whole of life. There are moments when they surround men with a blinding light, which makes them stagger in their purposes at high noon. There are days when their calm radiance makes heaven and earth serene. Whenever they are seen they draw the hearts and lives of men into universal and permanent relations. When they are obscured, human life sinks to something less than humanity.

178. As I have already sought to define them, and as their base falls within the subject of the next chapter, I will only add that the varying predominance of these classes of convictions among men is the great secret of character among both nations and individuals. Wherever men seek for universal truth, for eternal principles of goodness,

for pure principles of beauty, they develop in thought and work and life what is at once distinctive and permanent in the type of humanity, viz. obedience and freedom, the sacred order of duty and the sacred freedom of thought.

179. I will give two illustrations, premising that no illustration of such a subject can be either complete, or entirely applicable in its whole category. The predominance of the secondary consciousness gives force to national as well as individual character; and, if not the seat of the highest virtue, is the source of noble and energetic qualities, which are only dangerous when uncontrolled by the highest convictions of all. The Romans represented this collective consciousness in an intense form, and their superb conviction of the destiny of Rome reached the proportion of a national conscience. The steadfastness of their conduct during the disastrous invasions of the Carthaginians was grounded upon it, and many times their fidelity, under incompetent leadership, as well as their long endurance under their oppressive laws, stood upon this national faith. In private, as well as public life, this class of consciousness generates dignity and self-respect.

180. An example of the third class of convictions may be taken from the purest Greek philosophy. It might seem that the very breadth they gave to thought tended to throw down the barriers which

act as defences to nations, whose resistance to disintegrating influences is intensified even by intellectual limitations.

The action of the Romans among other nations, may be compared to the sailing of the iron pot among earthen vessels. They broke in this terrible presence. There are other views, however, to be taken of the dignity and power of a people, beside those which embrace only its strength. The iron implements of the Romans, whether for the service of peace or war, are lost, or have no other value than from their antiquity or their reflection of Greek art; while every frail potsherd, every broken fragment, once touched by Greek thought, is in the mighty wardenship of human reverence and delight. A modern ruler has said that the greatest nation is that which can put the most men into the field; yet it may be that a thousand years hence the memory of any people which has given thought its noblest forms, will be better preserved, than of that which possesses the largest standing armies. The cannon grows out of date, and is melted down, while the vase is treasured forever.

181. I have followed the fable in its own direction. Yet Greek art is but one of the benefits of Greek thought. Let it not be believed that its philosophy, its letters, its impassioned search for beauty, weakened the defences of its civilization.

At the time when that flourished, there was not that salt in society which sufficed for its preservation. The regeneration of men could be placed on no sufficient base. But such as it was, beautiful as the vase which represents it, the Greek type will remain — in philosophy, in art, in language — the treasury which contains the choicest possessions of mankind. The disciples of Christ were Hebrews, yet the New Testament comes to us through the Greek tongue.

182. The convictions of the mind, and what it asserts to be convictions, on the subject of duty are usually classed under the name of conscience. I do not find it necessary here to discuss its character or its field. It represents the function for the recognition of law, and not the law itself, so that we may go behind its statute in the individual mind to the primitive conceptions which develop with the exercise of reason, where we may better keep the distinction between cognitions and standards, between decisions and judgments, between what is personal or accidental and what is universal and immutable.

183. We may now sum up our conclusions.

It is true in some senses that the structure of universal nature is represented in human nature; that man is the microcosm of the world; that the grades of organization which, when noted by scientific classification, almost imperceptibly pass

into each other, are more or less represented in combination in the highest development of all. At the same time every human action is modified by the consummate function of thought. We eat, we drink, we sleep, otherwise than the brutes, because we think. There is scarce a voluntary act of our lives which has not conditions established by the action of human reason, although it may be very indirectly.

184. A classification of life might be made by its susceptibility to order, its receptivity of type, so to speak, if that may express what is the sole splendor of finite being.

The capacity for developing definite ends and typical forms is higher in the plant than in the crystal, in the animal than in the plant.

When consciousness appears, movement resulting from volition begins, which develops that automatic system, reflecting forgotten purposes, which succeed to the inferior automatic action of vegetable life.

Consciousness endures only in memory, as memory only in consciousness; they are correlative, for the record is dark without we see it; we do not possess ourselves in a successive moment without the record.

The automatic movement results from a blind force. The volitional movement springs from intelligence.

185. I said that consciousness could not be defined. But we may describe its phenomena as first the reflection of facts; after that as the medium in which these reflections are assimilated and develop into intelligent processes — the reflections reappearing it may be in the form of motives; the will being, in truth, merely the motive power. This is another way of defining mind as constituted by intellect, desire, and will.

The initiation of thought is marked by the development of its types. By means of these earliest standards human life is separated from animal existence. By the establishment of law, civilized life is distinguished from savage. In every stage of development the most receptive life is the most powerful; the most obedient is the richest.

This principle might be illustrated in every direction. But we will confine ourselves to one. In humanity, emphatically, the inferior nature has the fewest laws; the hardest and dullest mind, the lowest power of perceiving standards and submitting to be governed by them.

186. Let us once more examine the facts of which human experience is composed. We assume that the animal consciousness is compounded of impressions from the movement of life within the body, and the reception of impressions through the senses; which transmission, for various good

reasons, appears to us to be from without. At any rate, we may reason on this supposition, provided we remember that we can show no title-deed to its ground.

This within and without combine to produce a varied and often inscrutable experience. We find that the spontaneous life of the body and its impressionability through the senses are independent of us. Our consciousness is passive before the facts they present. But it is active in the consequences which follow their impression. They beget motives in us from which we act. Again, we rise above all the motives they can produce, or all the ideas they can develop, or all the emotions they can stimulate. And we are agreed to call this resisting and governing power the human will; the medium of animal life, which we have in common with the brutes, we call feeling, desire, emotion.

187. The emotional life develops, in the first place, into motives of desire, fear, affection, pride, hatred; and these impulses belong alike to men and brutes. However they may be complicated by ideas, their base is in animal nature. But all of them are altered and elevated by being related to the standards of thought.

All our domestic affections — the love of fathers and mothers and children, of brothers and sisters, of husbands and wives — are generated through

our blood. They are so transfigured in our nobler life that we forget their origin, and shrink from the recognition of their root in our animal existence. But in their power of beautifying and glorifying mortality they bear a magnificent testimony to the second birth which thought gives to every relation of humanity.

And the impulse to elective companionship, which is as strong a proclivity with animals as with man, rises to the noble form of friendship, which all civilized people have held to possess the character of virtue, because the animal propensity gains permanence and breadth by the scope which reason affords.

Thought transfigures, but does not destroy, the natural life. Emotion gains persistence by being related to human ideas, and in the heart of man becomes passion. As emotion is generated by the natural experience of consciousness, so passion originates in the action of thought upon the experience of life. Taking its shape from ideas, its power is enhanced till it becomes the most dangerous element of human character, unless it be under the restraint of the judgment.

Emotion is limited to the individual, except as it is shared by a sort of animal sympathy of propinquity; but passion, having its form from thought, has wider relations. If it embrace but one other person, it exceeds emotion. It may

sweep through a multitude, even a nation, in one of its single tides.

By the repression of the will the force of passion may be exhausted within the heart where it was conceived. But the fixed and austere attitude of the soul is not that of true humanity. Emotion and passion are strong and beneficent springs of conduct, if their scope is bound by righteous principles, and their form governed by the highest truths. The voluptuary becomes as passionless as the ascetic; and the destruction of human character is effected by the ascetic principle, as well as by license, although the assault is from a different side.

188. It is difficult to use words justly which have represented varying systems of thought. As the human will is generally allowed to have a specific character, that is to say, it characterizes humanity, we shall consider it as lying in abeyance when it does not govern by the standards of human thought. There must be conceptions which advance it beyond animal function, or it is not properly will.

And further, although aspirations for power or thirst for knowledge may develop it to a sublime efficiency, the consciousness of duty must exist before man becomes free; he may be more intelligent than the animals, as the human hand is more expert than that of the quadrumana, but

the idea of right and wrong must exist before his function is complete. Hence the complex action of humanity.

Let us review. The vegetable function is distinguished from crystallization by its development through its automatic organs. The animal function goes beyond the vegetable in governing some of its movements by volitions. Humanity advances further. Its volitions are not all generated by natural motives. Absolute, universal truths produce movements in humanity which cannot be generated in nature. Eternal principles may be placed before the mind, by which human nature may be lifted up, even to suffer crucifixion.

When motives are founded on general principles, man partakes of a universal life. His individualism is superseded, even as the action of the private soldier is incorporated into the movement of the army. The single life enters into the current of the whole. The will is freed from the supreme dominion of impulse, and of motives limited by the individual sphere, when it enters into that adoption which bestows general relations.

189. We think these views and this use of language are in accordance with the best ethics possessed by man.

The Scriptures represent the natural man as in a state of darkness, captivity, sleep, death; the

spiritual, the obedient, the righteous man as brought into light, freedom, and life, by adoption and obedience.

Hence the freedom of man is the freedom of citizenship It is neither the freedom of a tiger nor of a ruffian, of a savage or of a hermit. It is not lawlessness nor anarchy; it is conditional, like all that is beautiful and good, upon the fulfilment of what is due. Let us enter into its covenant, and the return is made to us of that which by nature we cannot have. It bestows upon us its own immutable condition, which no circumstances can curtail:

> "Stone walls do not a prison make,
> Nor iron bars a cage."

Henceforth no tyrant can bind our liberty, no misery can smother it, for it stands upon the eternal verities of thought. Without its law we are slaves to the circumstances of our lives; without this citizenship we are captives, with none to redeem us from our baser selves.

190. We shall not yet consider the origin of our standards of right and wrong, but we shall assume for the present, that there is generally contained in the sum of human consciousness, their relative notions. Being authorized by the mind of the individual, their standard is so far dependent. The function alone is universal, or

rather constitutional, in man. But whatever the form of these ideas, they underlie the judgments of the reason very early. The child may be conscious of them, before he has acquired the use of language, although they are distinct from every product of animal intelligence, referring of necessity to a standard.

As the eye gains its knowledge of perspective, not from the picturing power of the retina, but from conclusions based upon its comparative experience, so the reason acting upon its experience, with its dogmatic or other standards, whatever they may be, forms its judgments and views the action of all reasoning existences in the medium of its own thought.

191. Further: The existence of these standards is an *ipso facto* claim of supremacy. They are law. If a man know what is right, he should do it. If he know what is wrong, he should shun it. Duty is therefore their correlative.

Thus, from every direction we come back to this point as the characteristic of man, a capacity for obedience to standards, which can only be known to reason; but it is a capacity which is not a necessary condition. He may howl or he may sing, he may dig a cave or build a house.

192. Hence the extremes of human action and character. A forlorn savage, destructive to himself and others, or godlike in his thoughts and

deeds, lifted up into the freedom of citizens, and the communion of saints.

All this turns upon the law of humanity which is the fundamental question of our life. It remains for us to enquire how we shall know this law, that by it we may obtain the only human freedom, namely the covenanted freedom of a righteous will.

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